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What Other Nations Have Done to Help Their Disabled Soldiers and Sailors



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**Corn Exchange National Bank
Philadelphia**

What Other Nations Have Done to Help Their Disabled Soldiers and Sailors

The information in this pamphlet is compiled largely from reports and publications issued by the authority of the British Ministry of Pensions and includes also data from Belgian, French and American sources.



Prepared by

ALBERT N. HOGG

Corn Exchange National Bank
Philadelphia

CONTENTS.

Introductory	3
Reasons for Training Disabled Men	3
Vocational Training and The Smith-Hughes Bill	3
Necessity for Government Control	4
The Work in Great Britain	4
Trade Advisory Committees in England	5
Local Committees in England	5
Local Committees (Working Arrangement)	6
Joint Disablement Committees in England	6
Sub-Committees in England	6
Local Technical Advisory Committees in England	6
The Work in France	7
The Work in Italy	8
The Work in Belgium	8
Typical Man Problems	8
The Psychological Aspect	9
What Every Man Should Know (England)	9
The Hopeless Case	10
Conclusions Regarding Re-Adaptation	10
Concerning Choice of Occupation	10
The Public and the Employer	11
Importance of Adequate Local Facilities	12
Co-operation Among Local Committees (England)	12
Importance of Propaganda Work at the Hospital	12
Training at the Hospital	12
Training Courses Abroad	13
Tubercular Cases (Occupations Recommended)	14
Nerve Shock Cases (England)	14
Lip Reading for the Deafened	16
Unsuitable Industries	18
The Training of Widows (England)	19

REPORTS ON THE FOLLOWING TRADES, SUITABLE FOR DISABLED MEN, INCLUDING PROCESSES RECOMMENDED.

Agricultural Motor Tractor Work	19
Aircraft Manufacture	20
Boot and Shoe Manufacture	21
Boot and Shoe Making (hand sewn) and Boot and Shoe Repairing	23
Boot and Shoe Repairing (syllabus of instruction for training schools and work shops)	24
Cinema Trade	25
Clothing Manufacture (wholesale)	25
Clothing Manufacture (wholesale) syllabus of instruction for training in technical schools	26
Dental Mechanics	28
Dental Mechanics (syllabus of instruction for training)	29
Engineering	29
Furniture	32
Furniture (syllabus of instruction for training)	35
Gold, Silver, Jewelry, Watches and Clocks	38
Printing and Kindred Trades	39
Printing and Kindred Trades (syllabus of instruction for training)	44
Tailoring (Custom)	46

INTRODUCTORY.

UP TO the present time, all the leading belligerent countries, with the exception of the United States, are training their crippled men for gainful occupations.

Aside from its economic value, the work is a paramount National duty, and it will doubtless soon be undertaken in this country. It is, therefore, important that we should profit by the experience of other Nations in order that the best results may be secured.

Accepting the Canadian losses as indicative of those of the United States Army, there will be returned each year about 100,000 men for each million men abroad, of whom some 20,000 will require complete or partial vocational training.

It has been suggested that vocational re-training be extended also to those who are disabled in civilian operations. In this direction therefore as well as in the training of our disabled soldiers and sailors this pamphlet should be helpful.

REASONS FOR TRAINING DISABLED MEN.

The most important reasons are:

First. To insure economic independence. A man will be re-established as an independent, self-respecting economic unit. Any other policy will inevitably induce economic dependency.

Second. To avoid vocational degeneration. Men lose ambition while in the hospital. It becomes more difficult to stimulate ambition during the period immediately following convalescence. Training is necessary, therefore, at the earliest possible moment and persistent systematic development of training after convalescence.

Third. To prevent exploitation. Without skilled training the handicapped man will drift about in industry an easy subject for exploitation by the unscrupulous.

Fourth. To conserve trade skill. Disabled men may be established in their pre-war trade. Without such re-training, acquired trade experience will, in many cases, be lost and the ranks of skilled labor to that extent depleted. The drifting of handicapped men in any considerable number into unskilled employment will occasion demoralization and impair wage standards.

Fifth. To insure National rehabilitation. Conservation of trade skill has been found to be a factor of great importance abroad. The loss of skilled men is a problem. Now and after the war every country engaged will experience a great scarcity of skilled labor in agriculture, industry and commerce.

Sixth. To adjust supply of labor to demand. Demobilization may cause labor maladjustment—vocational training will provide one means of averting labor and economic disturbance and will help to sustain established standards of living.

Seventh. To develop new vocational efficiency. Occupations are often selected without regard to natural aptitude. New vocations may render men in very many cases more efficient producers than ever before.

VOCATIONAL TRAINING AND THE SMITH-HUGHES ACT.

Before the United States entered the war the drain on our man power brought the subject of vocational training to the front and resulted in Congress passing the Smith-Hughes Bill in February, 1917. This Law, recognizing vocational training as of National import while we were a neutral country, provided for a Federal Board for vocational education, and was designed to promote such education

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Cripples
War war etc Soldiers (disabled)
Soldiers - Re-education
Educational - Vocational

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in co-operation with the States and to administer the Federal aid granted to the States under the law. The Act provides that the States must agree to appropriate either through the State or locally, an amount equivalent to the amount received from the Federal Board. Five administrative regions were created with Federal Agents assigned to each region covering agricultural, trade and industrial subjects; these agents to gather information and to see that the work in the State is properly done. Most, if not all, of the States by this time have accepted the Act.

Naturally the work of the Board, begun before we were at war, has been diverted to the need of the army in the training of men for military purposes.

The battles of peace, like those of the war, will be between nations with their man power trained to a higher state of efficiency than ever before.

Germany's system of vocational education was begun by Bismarck some fifty years ago. Untrained men in Germany are scarce. The proportion of our own millions of men engaged in mechanical or manufacturing work who have received adequate training is very small.

For the training of disabled men, we already have, in the Federal Board, a Bureau partially equipped and organized ready to take hold of the problem in conjunction with the other departments of the Government. It is important that all existing facilities should be used. This is shown in the experience of other countries.

NECESSITY FOR GOVERNMENT CONTROL.

It has been found abroad that the support and control of rehabilitation must be in the hands of the National Government, but that the work itself must be done by a National Board, well equipped with ample funds and having broad discretionary powers designed to meet the rapidly changing conditions in the conduct of the war and to cover the growing experience of the country in dealing with the re-education and placement of handicapped men.

The work, when left to private philanthropy and control among the Allies, has met with signal failure.

THE WORK IN GREAT BRITAIN.

Great Britain was behind her Allies in training her disabled men. The duty of the State in the matter was pointed out by voluntary societies, which had been doing their best under great handicaps.

The work was begun in 1915 by giving technical training to the men while still in the hospital. Progress was quite slow until the men knew that their pensions would not be affected by any increase in their earning power.

The old plan of the War Office had been to award or refuse a pension, as the case might be, and to turn the man adrift.

The first official recognition of "after care" appears in an Act passed late in 1915, which established the Statutory Committee, to which body was entrusted this most important duty. Shortly afterwards, the Statutory Committee was placed under the control of the Ministry of Pensions. Under the new warrant generous terms were given to men undergoing treatment and training.

The duty of carrying out this policy was entrusted to Local Committees and in order that the fullest possible advantage should be taken of existing facilities, joint committees operating over large areas were formed so that the facilities could be pooled, and officers called "Representatives of the Ministry" were appointed for the express purpose of assisting local and joint committees in the work. In some respects, however, requisite facilities were deficient, especially those for the institutional treatment of certain diseases from which a large number of discharged

men suffer. To meet this difficulty joint institutional committees were established in England and Scotland and advantage was taken of the generous offers of the Red Cross Society and of other voluntary contributors to supply the initial cost of such institutions, the maintenance being provided by the State. These two Committees have been busy providing additional places for neurasthenic and epileptic cases in both countries, also for paraplegics and advanced tubercular cases in England, while in Scotland large extra provision has been made for giving orthopædic treatment to discharged men.

All over the country local and joint committees have put forward schemes for training those who cannot resume their old occupations. Private benevolence is also helpful.

During training, men are given the highest degree of disablement pension and at the end of it a bonus for the time it lasted. If they have to live away from home, their families get allowances.

The whole work is done under the control of the Ministry of Pensions, of which the local committees scattered throughout the country are the representatives. Thus the administrative work is geographically and industrially localized through a central government organization which, it is claimed, prevents duplication and overlapping.

The Ministry of Pensions naturally works in conjunction with the Ministry of Labor, and the all important questions of wages and hours for the men while in training, as well as other trade matters, are handled in collaboration with a Trade Advisory Committee for each trade.

TRADE ADVISORY COMMITTEES (England).

These Committees are set up by the Ministry of Labor in conjunction with the Ministry of Pensions and advise those departments as to the conditions under which the training of disabled men can best be given, the best methods of training, the suitable centres for it and generally to secure uniformity in the training of disabled men. The committee consists of an equal number of representatives nominated by Associations of Employers and of work people and in addition a representative of the employment department of the Ministry of Labor and a representative of the Ministry of Pensions attend the meetings in a consultative capacity but without the right to vote.

LOCAL COMMITTEES (England).

These, known as Local War Pension Committees, were established after the pension powers were taken from the Army and Navy and lodged with the Ministry of Pensions. They took the place of voluntary associations and various committees which had previously covered the same ground. They supplement the efforts of the pension Ministry. The Committees are made up of various local organizations, including the local Government. Under a Royal Warrant the Ministry of Pensions issues to all local committees instructions for the administration of treatment and training. These instructions are designed to set out in a clear form the procedure to be adopted in any case which comes before a committee and the notes appended to them give a detailed account, both of the more important classes of cases in which special treatment will have to be given and of the principles upon which training in Civil employments should be provided, so that they may have proper guidance in making arrangements for training with the local education societies or with employers of labor.

WORKING ARRANGEMENTS OF A LOCAL COMMITTEE (England)

It is the aim of local committees to have eventually a complete register of every local case. In practice, every discharged man resident in the area, on being reported to the Committee, is personally visited or invited to call at the office. Particulars of his service, pre-war occupation, etc., and present requirements are recorded and such action taken as is necessary. In the majority of cases, after a varying interval, the man is able to resume his previous occupation or be placed in ordinary industrial employment, usually through the agency of the employment exchange. In cases of difficulty where work of a light or special character is indicated the local committee themselves endeavor to place the man. A special register for discharged men is kept at the employment exchange and weekly lists from the registers of the exchanges and the local committees are interchanged.

JOINT DISABLEMENT COMMITTEES (England).

These committees cover larger areas than the local war pension committee and they were created primarily because the local committees were not always sufficiently large and varied to deal with the re-education of the disabled man. The essential feature vital to the success of the scheme in Great Britain is that all the resources in any given area should be pooled unreservedly. This necessarily demands the hearty co-operation of all local committees concerned.

SUB-COMMITTEES (England).

The work of local committees is in some sections supplemented by the operations of sub-committees. In densely populated districts this may be unnecessary, but in country areas and where local conditions seem to require it, the sub-division of the work is necessary to fully cover the field and to maintain that personal touch with the men which means much in getting results.

Voluntary organizations of various kinds are contributing their share of assistance.

LOCAL TECHNICAL ADVISORY COMMITTEES (England).

Where training in any particular trade has been approved by the Minister of Pensions, the Ministry of Labor may, on the advice of the Trade Advisory Committee, set up for the area in which the training is to be given, a Local Technical Advisory Committee. This Committee consists also of an equal number of representatives of Associations of Employers and Workpeople. Provided always that the two Ministries in consultation recognize the Committee as properly representative of the trade in that particular area, then the Local War Pensions Committee by whom the training is arranged shall consult this Local Technical Advisory Committee in regard to the following points:

- (a) The selection of candidates for training, with regard to their suitability for the trade;
- (b) The suitability of the training offered in technical schools and similar institutes;
- (c) The suitability of the training offered in factories and workshops with special reference to the prospects of permanent employment and the rate of wages offered at the termination of the training;
- (d) Any other technical point arising out of the training of disabled men for the particular trade.

The Local Technical Advisory Committee is to inform the Local War Pensions Committee and the Trade Advisory Committee if at any time, in their opinion, a sufficient number of men have been trained for their trade in the area in question.

In addition to the above Committees, Advisory Wage Boards have been instituted in various towns.

THE WORK IN FRANCE.

Instead of one centralized authority over the work, several Departments of the Government are concerned, such as War, Labor, Education, Trade, Interior, etc. It is reported there has been, in consequence, some overlapping and difficulty in getting necessary things done. Some degree of co-ordination was secured by creating a body called "The National Office," which is a public department attached to the Ministry of Labor.

The French system is that in every area from which an Army corps is raised, there is established a military training Centre and Hospital for the wounded of that Army Corps in the field. These training Areas known as "region" are distributed throughout the country. Not only are workshops attached to all the hospitals but there are also large establishments especially set up for re-education. The Hospital at Port Villez, for instance, overlooking the Seine half-way between Paris and Rouen, accommodates about 1300 disabled men. Here is the most complete installation of electrical and other appliances for orthopædic treatment and some thirty separate workshops where almost every conceivable trade is taught, the doctor having the principal voice in deciding what trade the man is to learn and being guided naturally by consideration of the curative quality of various forms of manual training in each case.

The large grounds in connection with the training areas are used for the training of men in agricultural pursuits—some 65% of the disabled men have been agricultural laborers and every effort is made by the French Government to return to the land any men who have come from it. As a consequence, unless a man's disabilities totally incapacitate him for employment on the land, he is not usually taught a trade, the French Government being afraid of the insufficiency of agricultural labor in the future development of the country.

Where, however, a man is injured to such an extent as to prevent his using agricultural implements, he is taught a trade in any one of a number of industries, according to his choice.

A man is detained at a military hospital or training centre until he is cured and fitted with an artificial limb, and in case of any damage to either he has only to return it to the centre from which he obtained it for repairs or a new one to be issued, free of cost.

As long as a man remains in a military hospital or training institution he is paid as a soldier and on his discharge he is pensioned under the Minister of the Interior, drawing his pension from the Prefects of the various departments. The work of local committees is unknown. There are civil societies which only deal with cases of disabled men who are unable to earn money for their own support, from such local funds as they are able to collect.

There are some striking points of difference between the English and French systems.

In France (and in Italy and Belgium also) training while in the hospital is compulsory, whereas in England it is not compulsory even in orthopædic and limbless hospitals which have workshops attached.

Compulsory training in France ceases as soon as the man is discharged from the army, with the result that a man usually refuses further training immediately upon his discharge.

In France no man is discharged from the army until his cure is complete. There is not that same localization of work, for "after treatment" of the discharged soldier or sailor, nor the same official effort for the placement of the men in industry. Apparently the only assistance available in reference to employment is that of voluntary associations more or less akin to soldiers' and sailors' help

Societies. There also seems to be considerable difficulty in adjusting wages to be paid to disabled men at work and while they are being trained.

However, it should be borne in mind that conditions in France are dissimilar to those in England, the former being far more of an agricultural country and the problem of re-employment in the two countries can hardly be compared. The great question in France is to get the men back to the land.

THE WORK IN ITALY.

The Law of Italy, No. 481, of 25th March, 1917, sets up a National Committee for the protection and assistance of disabled men having a council composed of two deputies, two members of the Senate and fifteen members representing the different Ministries, and also various pension and relief societies. The law applies to all persons, including civilians, whose working capacity has been substantially diminished in some way or other by war service. The Committee provides financial assistance, treatment, training, which may extend over a period of six months or more in special cases, suitable employment, legal aid, etc., and makes use of public and other institutions. A disabled man has the option, to be exercised within a year of the war, of returning to his previous occupation, or of selecting one suited to his impaired condition.

THE WORK IN BELGIUM.

Unhappily, there is no Belgium to which the Belgian crippled can go back; the State, therefore, has to maintain them.

Workshops are attached to all the Belgian Hospitals, the same as in France, with other establishments set up for re-education.

The problem in Belgium is greatly simplified. The War office apparently takes sole charge of the work.

TYPICAL MAN PROBLEMS.

An Allied Conference in May, 1917, disclosed some interesting points. One especially emphasized was the trouble in getting the disabled men to understand that training was all for his benefit.

To quote—

"Very many disabled soldiers refused to avail themselves of the facilities for re-education, either in consequence of their listening to false ideas which are current, or through ignorance of the good results obtained in the schools. Some persist in believing, in spite of assurances iterated over and over again, that the pension is reduced in consequence of re-education; others seem to think that the fact that they have been wounded gives them a right to employment by the State. Others again are tempted by the offer of obtaining good wages immediately and accept employment which is bound to be temporary only. Lastly, there are some who despair altogether of ever being able again to undertake manual labor, not realizing the great improvements which can be produced in their condition by training.

We must endeavor to dissipate these prejudices and this ignorance by an organized propaganda. We must carry it on among the wounded men while they remain in hospital and when they have left it without having been trained. We must carry it on among their families who, profoundly moved by the fate which awaits the disabled soldier, forget, even when they are not ignorant of it, the organization which exists for improving their condition.

Beyond all things, we must make it quite clear that neither the life pension nor the renewable pension can be reduced in consequence of re-education.

The discharged soldier is certain of receiving the whole of his life pension, even when he has been put in a position by means of re-education to earn wages equal to, or greater than what he earned before.

And in the same way the amount of the temporary pension, which is always subject to revision, depends in no way on his training, but solely on his physical condition. In deciding whether the temporary pension should be continued at the same rate, or diminished, or converted into a life pension, the discharged soldier is not asked whether he has been re-educated or not, he is examined simply as to whether he has recovered and in what degree he has recovered, the use of his arm, his leg, etc.

THE PSYCHOLOGICAL ASPECT.

No two cases are alike; no two men are alike. Those who look well are often only outwardly and physically so. Mentally, they have, it has frequently been proven, failed to recover their normal balance. They require to be helped and to be guided in every way. All allowances must be made for them. They are sensitive to a degree and are easily discouraged. On the other hand, they respond readily to kindness and to sympathy. It often depends on how a man is handled whether he is made or marred for life. Do not minimize the overwhelming importance of the psychological aspect of the problem. Those who fail to realize this fact will have failure written large over all their efforts.

WHAT EVERY MAN SHOULD KNOW (England).

THAT he can get the fullest information as to what can be done for him from his War Pensions Local Committee.

THAT the address of the Committee can be obtained at the Post Office nearest his home.

THAT the War Pensions Local Committees are not distributing charitable funds, but funds provided by the State.

THAT every man disabled by War Service has a right to a pension or gratuity.

THAT HE HAS A right to the most careful and effective treatment obtainable FREE.

THAT if he requires an artificial limb, it will be supplied and maintained in good order FREE of charge.

THAT if his disability prevents him from returning to his old trade he will receive FREE training for a new one.

THAT unless a man claims a pension based on his former earnings, no account is taken of his earnings or earning capacity, or of the extent to which this may be improved by any training that may be given to him.

THAT no permanent pension will be reduced because a man has accepted training.

THAT while he is being trained he will receive additions to his pension for the support of himself and his family.

THAT neither treatment nor training will cost him a penny.

THAT his Local Committee will help him to find employment.

THAT his Local Committee will look after him if he suffers from illness at any time as a result of his service.

THAT if he is in any doubt or difficulty, or thinks he has not got his proper pension, his Local Committee will take up his case and help him.

THAT HE MUST TELL HIS LOCAL COMMITTEE WHAT HE WANTS.

(Ministry of Pensions; Official)

THE HOPELESS CASE.

The hopeless case appears to be that of the man who is discharged on account of some chronic medical ailment, who is physically incapable of sustained effort, or has periodic relapses and is usually in receipt of a small pension—such a man is often in and out of half a dozen different situations in as many months. One is forced to the conclusion that although not a totally disabled man in the eyes of the Invaliding Board, economically he must be regarded as such.

CONCLUSIONS REGARDING RE-ADAPTATION.

Dr. Sand (Belgium), in a very complete study of professional re-education, said that the victims of industrial accidents usually showed a feeble power of re-adaptation, but that the contrary was true for those crippled by warfare.

The conclusions he came to were, that:—

(1) The loss of a lower limb interfered with a man's getting a livelihood in only a small number of trades, and that the loss of an arm also allowed the man to take up remunerative work in many cases so long as he was scientifically and individually trained.

(2) It is more logical, easier and more economical to endeavor to place the man in the trade he worked at previous to his injury.

(3) Each case should be individually studied before a choice of occupation is made. The doctor in charge of the case should be the sole arbiter of the patient's destiny as to his future work after complete study of his disability, calling in specialists to aid him in his decision, if necessity arises. Regarding the choice of a trade the advice of the technician should in all cases be obtained. Crowded trades or those of an unstable or non-remunerative kind should be avoided. The kind of trades pursued in the man's native place should be taken note of.

CONCERNING CHOICE OF OCCUPATION.

Concerning the choice of occupation Dr. Lebrun (Belgium) groups the men in four categories:—

(1) Those who after the war will be able to resume their former occupations.

(2) Those who are incapable of taking up their former trades. These men should be allowed, as far as possible, the choice of a new occupation, without exercising any pressure on them to enter a workshop where for the moment work abounds or the remuneration is great.

Medical and social considerations should be the main factor, and the trade chosen ought to be in consonance with the man's physiotherapeutical treatment. Inquiry should be made as to his domicile, his social status, his resources, tastes, etc., and the reasons which urge him to choose the trade in question; and in this connection it must be borne in mind that he will speedily abandon a trade into which he has been urged to enter more or less against his will.

(3) Those whose financial condition is such that no trade is of use to them. For these men professional (manual) work will be prescribed by the doctor solely with the view of physiotherapy, and he will choose a suitable workshop where it can be carried out.

(4) Complete invalids who cannot be re-educated. These latter will have to be supported by the State and every effort should be made to ameliorate their condition.

Dr. Nyns (Belgium) was of the opinion that the deformity itself does not give absolute indication as to choice of trade, although it is the chief one. He has noted that men with similar lesions differed largely with regard to the aptitude they displayed during their apprenticeship.

One-armed men were the most difficult to re-educate and should therefore be advised to take up work necessitating the use of one arm only, or work of a non-manual character.

Those with various lesions of the upper limb short of amputation require careful selection for their new employment.

With regard to men having lost a lower limb it is a mistake to suppose they cannot take up a trade necessitating their standing up.

Men with head injuries should not enter trades where there might be danger of accident through giddiness or where the posture is of a nature to aggravate the lesion.

M. Alleman (Belgium), who is director of studies at Port Villez, gave the indispensable factors in the choice of a profession under the following headings:—

A. *Physical Aptitude*.—A searching medical examination should be made in order to exclude the candidate from work requiring certain movements or efforts which are incompatible with his disability. It thus follows that the doctor should be *au fait* with the movements required in each industry.

B. *Predilection*.—Compulsion should never be employed. In certain schools 80 per cent. of failures have occurred through misconception of this principle. Those of apathetic nature should be stimulated by example and persuasion on the part of both instructors and advanced pupils demonstrating to them what can be done by application and patience.

C. *Habitual Residence*.—Agricultural workers should take up their previous occupation; rural artisans should remain in their villages and town dwellers in their towns.

D. *Previous Occupation*.—Use should be made of experience gained by men in their previous employment in directing them to take up occupations of a similar nature using the same raw materials of which they have some knowledge. A fitter or mechanic could become a designer, a mason or carpenter, an inspector of work, etc.

E. *Intellectual Capacity*.—Certain trades require intellectual capacity, and thus men in this category who have lost an arm could be usefully employed in intellectual occupations, e.g., bookkeepers, managers, teachers, etc., the author only having limited confidence in the efficiency of artificial apparatus in place of a hand.

F. *Moral Qualities*.—Will power, tenacity and patience should be steadily cultivated, and the feeble who before the war had tried several trades should not be put into occupations requiring long and sustained effort.

G. *Financial State*.—Certain trades require the possession of some capital, and unless funds can be obtained from charitable societies men should not enter them, though efforts should be made to prevent men falling in social status.

THE PUBLIC AND THE EMPLOYER.

After discharge, the typical man goes home, and sooner or later calls on his former employer. It is especially important to educate the public generally as to the extent of the disabled man's rights and as to the National importance of bringing every influence to bear on him to exercise those rights. The average employer, anxious to help, is profoundly ignorant of the opportunities offered to the disabled and devotes his attention to finding an immediate unskilled light job, instead of encouraging training for some occupation in which the man's disabled powers could ultimately be used with efficiency.

IMPORTANCE OF ADEQUATE LOCAL FACILITIES.

The progress of the work in England has been retarded by lack of local training facilities. In one area it was reported that not more than 4 per cent. of the discharged men expressed any desire or willingness to be trained, and of them, the majority, on learning that they would have to go to some other centre, either abandoned the idea, or elected to wait until the local scheme was in operation.

CO-OPERATION AMONG LOCAL COMMITTEES (England).

In the County of Lancashire in England, there are no less than 41 local committees. A committee was appointed to consider and report generally on the question of co-operation among other War Pension Local Committees with regard to carrying out their powers and duties.

The committee obtained from the Secretary of each Local Committee comprehensive information regarding the hospitals and kindred institutions situate within their respective areas.

A second committee was appointed to investigate the resources available for the training of disabled men in the county.

Replies to a circular addressed by them to all Education Committees in the county were received from 56 authorities and from these returns a schedule has been compiled.

A complete survey has thus been made of existing facilities, both for treatment and training in the county and an excellent basis provided for a systematic approach to the problems of re-education.

IMPORTANCE OF PROPAGANDA WORK AT THE HOSPITAL.

Training establishments which have shown a large increase in numbers of men reporting for training find the advance in the numbers training due to continual propaganda at the Hospitals feeding the training base. This is especially important in voluntary systems and would therefore probably likewise apply to any system established in the United States. Large numbers of men are apt to pass by any promising scheme of training and step out into the jobs that for the moment await almost anyone in these days of scarce labor.

The disabled man must be convinced that to be re-educated, not only physically, but professionally, is absolutely essential to him against a future which, fat enough for the moment, is going in a few years' time perhaps, to be very lean and hard, and for a man, handicapped as he will be, simply impossible, except for charity.

TRAINING AT THE HOSPITAL.

Experience abroad has proved that successful results require training of the men while they are in the Hospital. In one English institution which fits men with artificial limbs, training workshops were erected by the end of 1915, the first attempt in England to deal in a practical way with the problem. Success was not immediate, but with the gradual dissipation of the fears entertained by the men that their pensions would be endangered by any increase in their earning power, more confidence was established and the capacity of the workshop and of the institutions was in the end taxed to the uttermost.

The training thus started, if not completed upon discharge from the Hospital, should be continued outside until the man is educated. It is therefore very important that arrangements be at hand so that those going through the classes at the Hospital might be passed on when they are discharged for such further training as they require. The resources of technical institutes should be mobilized for the purpose. Every patient is interviewed the day after he enters the hospital when his industrial history is recorded and his wishes as to the future are ascertained.

It has been found that some 40 per cent of the men return to their former employers and some 35 per cent. will only consider employment near their own homes. These naturally come under the care of local committees, so that those who are actually trained at the hospital are drawn from the ranks of the remaining 25 per cent., who are, as a general rule, ready to accept work anywhere.

TRAINING COURSES FOR DISABLED MEN ABROAD.

Taking England, France, Belgium and Canada as a whole, we find the following list of occupations in which training is available for disabled men.

Agriculturists	Machinists (Fitters)
Air Craft Manufacturing	Machinists (Tool Workers)
Architectural Building	Masseurs
Baking	Mercantile Work
Basket Makers	Metal Turners
Boiler Makers (Iron and Copper)	Metal Workers
Bookbinders and Paper Making	Modelers
Bookkeepers	Morocco Dressers
Box Making	Motor Tractors
Brush Makers	Motormen
Building Trades (not specified)	Moving Pictures and Theatres
Cabinet Making	Music and Singing (blind)
Carpenters	Netmakers
Chairmakers and Caners	Notary Clerk
Chauffeurs	Opticians
Compositors	Orthopedics and Bandage Makers
Coopers	Painters (covering House and Art)
Cutlers	Pattern Makers and Molders
Decorators	Photographers
Dental Mechanics	Pipe Making
Designers of Lace	Plastic Arts
Draftsmen (not specified)	Plumbing and Heating
Draftsmen (Tracers)	Polishers
Draftsmen (Cotton fabrics)	Printing
Dyers	Sandal Manufacturers
Electricians	Sculptors
Engraving	Sheet Makers (cutters)
Fencing Masters	Shepherds
Furniture Trade	Shoemakers
Instructors (Primary General)	Shop and Factory—salaried work
Firemen (not specified)	Soap Making
Fishing Tackle Makers	Stenography and Typewriting
Furriers	Statuary Makers
Gardners and Horticulturists	Suspender Makers
Goldsmiths	Tailors (Mens and Ladies)
Hair Dressers	Telephoning
Harness Makers and Saddlers	Tinsmith
Industrial Designers	Toy Makers
Instrument (fine) makers	Watchmakers
Jewellers	Wireless Telegraphy
Laboratory Work	Wood Carvers
Leather Trades	Wood Cutting (Toys)
Locksmiths	Woodworkers
Machinists (not specified)	Wooden Shoe and Galosh Makers
	Wigmaking

TUBERCULAR CASES.

(OCCUPATIONS RECOMMENDED)

Basket Making	Light Porters
Bath Chairman	Lodge Porters
Bus and Train Conductor	Market and Flower Gardeners
Canvassers	Tractor Drivers
Caretaker (if not compelled to sleep in unhealthy basement)	Night Watchmen
Carpenters and Joiners	Park Rangers
Farm Laborers	Park Attendant
Foresters	Policemen
Fishermen (line only)	Postmen (if already in one of these services)
Gamekeepers	Rent Collectors
General Laborers (excepting heavy and dusty jobs)	Station—Bookstand Attendant
Hawkers	Travelers
Insurance and Commission Agents	Timekeepers
	Ticket Collectors
	Window Cleaning

NERVE SHOCK CASES (*England*).

Until 1917 there were no special institutions for the after-treatment of men who had been discharged from the Navy or the Army. Until their discharge they were, and still are, placed in Military Hospitals in France and in England, and their final discharge is not decided upon by the Special Medical Board until it is judged that their Service days are over. What happens to the men is somewhat as follows: First, they go to hospitals in France behind the lines. Here most of the men quickly recover. The strain upon their nerves had for a while overcome their power of will. If they are healthy subjects they are soon able to return to duty. Those less healthy, whose treatment yields less favorable results, pass to base hospitals in France. A further weeding out process goes on and, the demand upon space being very great, the cases which are passing from the temporary to the chronic are sent home to England. Those who seem most likely to recover quickly go to ordinary military hospitals; those whose nervous systems are more obdurate are sent to military hospitals which have neurological departments. The last line of Army treatment in England before discharge consists of special neurological hospitals such as Maghull (Liverpool), and Springfield (Tooting). Very many men are cured here and it is only the men who, during this final process of treatment, fail to respond to it who are discharged from Maghull and Springfield into civil life. Discharges do take place at other stages in the treatment, but these are of men who are physically unfit and whose nervous breakdown has made conspicuous their lack of value to the Army.

Once men with functional nervous disease become really chronic and all will power is lost (they are cured by stimulating their will power), there is very little chance of their unaided recovery.

THE HOME OF RECOVERY AT GOLDERS GREEN.

Men who have been discharged at any stage in their naval or military treatment, may apply to enter the Home. They are selected by the Special Medical Board, and are cases which have been given up by the Naval and Military Authorities as of no further use. Most of them have already been through a whole series of hospitals. Some are men who, in ordinary civil life even if they had never served, would have been of a morbid, self-conscious, habit of mind. Not many men of out of doors sporting instincts find their way into chronic nervous lists and so into the Home of Recovery. And thus it comes about that the Home of Recovery has to deal

with cases selected for difficulty, not for ease, of treatment. When it succeeds it is performing something approaching a medical miracle. And yet the medical miracle quite often is performed.

THE SUPPLEMENTARY CLINICS.

It is not only at Golders Green, and at its sister institutions, that nerve-shattered sailors and soldiers will be treated and cured. They are multiplying rapidly; the obvious merit of the work which they are doing attracts to them the support not only of the Pensions Ministry, and the Red Cross Society, but also of the pious donor. But when the first Home of Recovery and all the others have done their utmost much will remain to do. Many disabled men are unwilling to enter a special institution, others are as adequately treated in clinics as out-patients. And the great advantage of the small clinic for out-patients over the large institution for residents is its comparative cheapness. One needs only a suitable house in a suitable district and a staff of doctors and nurses.

It was decided by the Ministry to start these small clinics. The men who attend these clinics receive the same personal attention as those who live at Golders Green—for their cure is effected by personal influence more than by anything else—they will be built up by gentle exercise in a gymnasium under the instruction of skilled nurses, and they will be able to live at home and even occupy their minds with light remunerative work. They will receive their temporary disablement pensions and allowances for any children, the Ministry will pay their fares in the journeys to and from their homes, and they will receive money for the time lost when they have to leave their work in order to attend the clinics. In this way men will be reached more readily than by the regular institutions, and, as the Clinics multiply in numbers and spread themselves over the large cities, a larger number of the nerve-shattered men will be treated than could be possibly dealt with in any other way. Not only will these clinics attract men who could not possibly be accommodated in, or recommended for, the larger institutions, but the men discharged from Golders Green and its sisters will be followed up and not allowed to lapse into their old nerve troubles for want of willing hands to help them.

At these clinics, just as at the institutions, it will be impressed upon the discharged disabled men that none of those who suffer from functional nervous disorders, from what is popularly called "Shell Shock," or from neurasthenia in its varied forms, can ever under any circumstances be recalled to the Colours. This security from the terror of Going Back plays no small part in the cure of the men.

As the institutions and clinics expand the chief difficulty will be to obtain the specially trained doctors upon whom depend the whole science and art of treatment. It is not a case with the nerve-shattered man of a facile amputation or the writing of a prescription. They have to be studied and influenced as individual human beings. Few medical men have had in ordinary practice any experience of the kind needed, and in order that a sufficient number may gain it there has been set up a "School" for nerve specialists at Maghull, Liverpool. Here, in a military neurological hospital, the doctors who are selected get trained for their new strange work, they receive professional fees while undergoing training, and they are maintained free of charge by that all pervading organization, the Ministry of Pensions.

In the grounds are workshops; one for light engineering in which men are taught the use of lathes and drilling machines, and that most ancient of all mechanical trades—iron forging. In another shop are taught carpentering and wood work generally and the men take much interest in making small articles of furniture for their own homes. There is a basket making shop, and here also much skill is developed in a simple but most interesting craft. An old motor car, taken down and put together many times, serves for instruction in motor mechanics. Switchboards are made and lights fitted up, and so some acquaintance with electric light fitting

is acquired. In each department there are competent instructors. The rates of pay have been fixed with the concurrence of the trades unions, and in the present state of the labour market all men who become reasonably well skilled are sure of obtaining work. A most interesting feature of the establishment is a large French garden equipped for producing vegetables by intensive culture. Major Fraser, one of the leading exponents in England of the French system, has at the request of the Ministry of Pensions moved the whole of his plant of frames and glass "cloches" to the Home and there an almost incredible quantity of early vegetables will be grown upon a couple of acres. It is hoped that this French gardening will, from the comparative light nature of the work, inspire enthusiasm among these disabled men, and will also be a means of encouraging generally the extensive adoption of French methods of culture. A man who has the intelligence and patience to learn the business can take four crops a year off a couple of acres and earn for himself not far short of £500 a year profit.

The Home is a hospital, yet it is not a bit like a hospital. It much more resembles a very comfortable country house. The rooms are large and airy, the sun shines through the great clear windows. There are indoor and outdoor games and recreations to suit all tastes. It is a place very soothing to the nerves, an ideal spot in which to laze away a summer and in which to write a novel.

THE COURSES AT THE HOME.

When a man has been recommended for the Home of Recovery by the Special Medical Board he is put first on a waiting list, for usually he cannot be entered at once. It happens, unfortunately, that a good many men who are offered what for simplicity we may call the Golders Green treatment, do not accept it, and a good many more who do accept change their vacillating nervous minds. When a man has entered he is placed in the Hospital and brought under the direct personal influence of the resident medical staff and of the visiting physicians. The doctors try to get very close to the men, heart to heart, to understand exactly what their troubles are, what is each man's "personal equation," what apart altogether from war strain is wearing out their frazzled minds. Domestic and other personal worries play a large part in inducing the morbid, introspective, excessively self-conscious condition which leads to neurasthenia. The business of the doctors is by patience and gentle tact to make close friends of the individual men, to stimulate their will power and desire of recovery by direct personal influence, and to make them understand that the Ministry in caring for them is not anxious to save money over their pensions. Patients, though many of them have had twelve months or more in military hospitals, do respond fairly quickly to this personal intensive treatment and then become convalescents. There are continual disappointments, continual sets back, but the work goes on and the curve of improvement steadily rises. If it does not, if it proves immovable, then the Home of Recovery can do nothing. There are not a few of these chronic nervous patients who defeat even Golders Green. During convalescence a man's physical strength is built up and his will power steadily improved. Soon he becomes able to "sit up and take notice" and show some intelligent interest in his surroundings. With interest comes a rapid advance towards a condition to which the word Health may be applied. Then when a man is considered well enough to do light work he passes to the garden or to one of the workshops and there his cure is carried so far as it will go.

LIP READING FOR THE DEAFENED.

The deaf man walks about in the great speaking and hearing world quite unobserved by his fellowmen. The blind man is seen wherever he goes. Of these two great physical defects it is impossible to decide which is the more terrible.

If the two congenial classes themselves are questioned, it will generally be found that they pity each other. Neither of them has ever fully or even partially realized what the loss of sight or hearing respectively means. To acquire blindness or deafness after the blessing of sight or hearing has been enjoyed for many years is even a greater calamity in its effect on the spirit of men, than affliction from birth.

There is no class of disablement resulting from the War which is so likely to be overlooked as that of the man discharged from the Army because his hearing has been lost. His hands and limbs and eyes and general aptitude for manual work are as good as ever they were, but his deafness slows down or entirely prevents the rapid communication of business usage.

It has been suggested that colonization on similar lines to that wonderful institution, the St. Dunstan's Home for the Blinded Soldiers, should be carried out. But this is in many respects undesirable and unnecessary. The deafened soldier who gets back to his original work, or who even takes up some new suitable work, generally of the handicraft kind, is in no difficulty in regard to communicating with others; the difficulty is for others to communicate with him. They can do this by writing, by signing, and by speech. There is no reason why all three methods should not be used, but speech is the normal method of everyday life, and lip-reading makes it possible to all who cannot hear. The congregation of deaf men in Homes would neither be conducive to speech communication nor self-reliance. It would tend to sap the power of self-help, and cut off association with the world at large.

The ability to lip-read may soon be acquired by adults who become deaf. It is chiefly a question of practice and perseverance. The opportunity for practice at first is best secured in the home circle. After a certain facility has been gained it will become useful in connection with everyday work, and comparatively easy, as the phrases used in connection with particular forms of work will be generally more or less obvious, *e. g.*, "Give me that hammer," "Shut the door," "What time is it?" "Are you ready?" etc. Workers in large mills, where the machinery deafens sound, can generally lip-read one another in such obvious phrases as the above.

But this kind of lip-reading goes no further. It is not as efficient as the lip-reading of the orally taught and clever deaf boy or girl of 15 or 16 years of age, who can take down a piece of dictation, or reproduce a short story accurately.

The adult person who acquires deafness should therefore, by constantly watching the lips of friends and fellow-workers, aim at a complete mastery of lip-reading. It should be remembered, however, that lip-reading can never fully take the place of good hearing. It has its definite limitations:—

1. Two persons cannot be lip-read at once.
2. A good light on the face of the person speaking is a necessary condition, *e. g.*, the deaf person must have his back to the window or light, and the speaker must face the window or light. After a time the deaf person generally contrives to get into a suitable position.
3. The totally deaf very generally become better lip-readers than the partially deaf, as lip-reading depends on other means of speech communication being impossible. The partially deaf person relies on the little useful hearing that remains to him. Even the very best teachers of lip-reading cannot lip-read themselves, because they are not obliged to, on account of their good hearing.
4. The adult person who becomes deaf has not only to think of himself and his disability, but of the general public. If he can lip-read people quickly, he will spare them the trouble of writing or signing to him. In business there is not generally time to write: people cannot be troubled with it. Inability to lip-read therefore means inefficiency, and what is very often worse—isolation. Friends at home may take the trouble to write, but outsiders will not.

The Deafened Sailor or Soldier who fully realizes what is meant by the above remarks will no doubt at once say, "What have I to do then?" In the first place he should join a class for lip-reading, and get a good general idea of what it means. The experienced teacher will soon put him on his feet in regard to it, and the rest depends on himself, practice, and perseverance. He starts out in an infinitely better position than the born deaf child, for he has heard and acquired speech and language.

Now in regard to Speech. Speech is purely imitation. Children born and brought up in England hear English and speak English; children born and brought up in France speak French; children brought up in an English home in France speak both languages, because they hear both. Spoken language is not hereditary. Loss of hearing then has a serious effect on speech, because it takes away the originating speech impulse—hearing.

So the deaf soldier naturally says, "Shall I also lose my speech?" The answer is that if he learns to lip-read, and gets into the habit of watching speech, it is not likely. To keep up his speech he must give it exercise—talk, read aloud from the newspaper to his family, etc.

Total deafness coming on in adult life does not mean loss of speech, but a danger of it becoming weak and indistinct. The dropping of the final consonants in words is the most common form of trouble, *e. g.*, t's, p's, d's, etc., etc., so that deaf people have constantly to be requested to speak up. If the power of well-voiced speech slips away it is difficult to get it back again. It should therefore be kept up, and in a short time a new sense will be developed—a motor impression of sound, of the power or weakness of the voice. The born deaf child who is taught to speak and lip-read develops this sense.

UNSUITABLE INDUSTRIES.

Certain trades which at first sight appear to provide suitable openings for disabled men, and for which many disabled men desire to be trained, are in fact ordinarily undesirable as a subject of training unless there are special circumstances in the case. The object in view is to provide training for men in occupations in which they are likely to obtain a permanent livelihood at a satisfactory wage, and the fact that, owing to the absence of a very large number of men on war service, there is a great temporary demand for men in certain occupations, does not necessarily prove that it is desirable to train men in these occupations. Careful enquiries have been made into this subject and attention is drawn to the occupations mentioned at the foot of this note and to the reasons which in each case make training undesirable in them. These facts should be called to the attention of the men while in the hospital, as a great disappointment is caused to men who, whilst in hospital, have been persuaded to decide on a course of training for a certain industry, and who find when they apply to their Local Committee, that that training is not approved.

REASONS

- | | | |
|---|---|---|
| <ol style="list-style-type: none"> 1. Motor Driving 2. Wireless Telegraphy 3. Telephone Operators 4. Clerical Work (unless highly skilled) 5. Saddlery and Harness Making..... 6. Poultry Farming | } | Probability of over crowding at the end of the War.

Diminished demand and length of training required.
Need of capital in order to commence business. |
|---|---|---|

THE TRAINING OF WIDOWS (England).

In England, in the majority of cases, free training is allowed widows who are in receipt of a pension, provided—

The training is needed.

That the occupation is suitable.

That it will be a permanent livelihood.

That her children under sixteen years are properly cared for.

That, if her training is away from home, the Local Committee where she trains sees she gets her allowances, and

That she is suitably lodged.

That suitable training certificate be given, one after a month's probation period, showing progress, and one at end of training period.

That in respect to maintenance allowance, additions above regular grants will not be sanctioned unless it can be shown

(a) She gives up a remunerative occupation.

(b) Obligated to maintain home in her absence.

(c) Special cost of keeping children in excess of regular allowance for same.

(d) Any other special justifying circumstances.

The Local Committee are instructed to definitely satisfy themselves on the following points in receiving applications for training from widows.

1. Suitability—physically and mentally.

2. Satisfactory arrangements for care of children and whether occupation would be inimical to her position in home. (Generally speaking, a widow with young children should not be separated from them.)

3. Adequacy of equipment in training institutions.

4. Reasonable prospects of permanent and remunerative employment.

PERIOD OF TRAINING.

Normal period three months—probably covering occupations formerly employed at, or less highly skilled occupations. Longer periods of course in the more skilled occupations, subject to approval of Ministry.

REPORTS ON SPECIAL TRADES SUITABLE FOR DISABLED MEN.

In England the Government has been conducting investigations in different industries suitable for disabled men. These investigations cover country-wide industries and as an investigation is completed, a pamphlet on the Trade is prepared by the Trade Advisory Committee and is issued by the Ministry of Labor in conjunction with the Ministry of Pensions. The information is intended not only for the use of Local War Pension Committees, Employment Exchanges, Technical Schools and Institutes and Military Hospitals, but also for the use of employers and work people and any who are interested in the problem of the training of the disabled Soldier and Sailor.

The reports contain much trade information which applies to conditions in England such as location of industrial centres, particulars regarding allowances, regulations, etc., which as they would not apply to the United States, are largely omitted from the reports which follow.

AGRICULTURAL MOTOR TRACTOR WORK.

Men must first obtain a preliminary knowledge of tractor mechanism through a technical school course. Not adaptable for men with serious specific injuries, especially those which affect active movements—especially liable to accident.

SUITABLE CLASSES.

Men suffering from the after effects of shell shock, gas poisoning, neurasthenia, tuberculosis, etc., if capable, after training, of a full day's work in the open.

Men with slight specific injuries but capable of free and active movements, having the full use of both shoulders, arms and hands.

DOUBTFUL.

Men suffering from specific injuries, including, for example, an artificial leg below the knee.

PERMANENT PROSPECTS.

Part of time would probably be required for other farm work; the more limited a man's skill, the more dependent for permanent employment and adequate wages, on his capacity for other farm work. Thorough training in order to obtain special skill on tractor or other motor machine work on the farm is therefore important in order that skill may be their chief asset in the position.

The technical school course should include:—

(i) The theory of the motor engine generally and the agricultural motor tractor in particular, including assembling and such workshop processes as will enable a man to take charge of the tractor and do ordinary repairs; especially if this will enable him to take charge of other farm machinery as well.

(ii) An elementary training in the working of the tractor and the plough.

The whole course should, as a rule, last for not more than three months, or the course may, in suitable cases, be reduced to two months, provided that the Local Committee is satisfied that the men are likely, with the reduced training, to prove competent for permanent private employment afterwards.

AIRCRAFT MANUFACTURE.

The manufacture of aeroplanes is a comparatively new industry, but during recent years very great progress has been made in its organization.

In the construction of an aeroplane the principal parts are the engine, the wood-work of the planes, etc., the wiring, assembling and erecting of planes, elevators, fusilages, etc. There is a considerable amount of hand work in addition to the machine operations, both of which would be suitable for disabled men, provided they are able to stand and, in some cases, able to climb. The Wood-working processes on the whole are not heavy.

SUITABILITY OF THE WORK FOR DISABLED MEN.

The following is a list of the processes suitable for disabled men:—

1. Wood-working machines: setting up and operating.
2. Finishing Wood-work.
3. Assembling and Erecting.

PROCESSES.

1. Wood-working Machines; and 2, Finishing Wood-work.

All the operations generally require that the man must be able to stand for the greater part of the time, but the loss of one leg would not necessarily disqualify, provided the man has a good artificial limb and is able to move about fairly freely. The man must be able to apply a certain grip with one hand and partial use of the other hand is necessary. Fair eyesight is required.

The machine processes are not generally suitable for men suffering from shell shock.

3. Assembling and Erecting.

These processes are not suitable for men unable to climb freely in and out of the body of the aeroplane. Full use of both hands and arms is required but the loss of one or two fingers would not necessarily disqualify. Good average eyesight is required. Mechanical aptitude and dexterity are useful qualifications.

PROSPECTS.

There is a great demand for suitable men at the present time and it is believed that the future developments of the industry will ensure a reasonable prospect of continuity of employment after the war.

LIST OF TYPICAL SEMI-SKILLED OPERATIONS.

Main Planes, Tail Planes, Elevators and Ailerons.

Rib assembling in jigs.
 Rib finishing (sand-papering, etc.)
 Assisting on plane assembling, *e. g.*, threading on ribs, etc.
 Wiring up planes and riveting bolt ends.
 Assembling elevators and ailerons in jigs.
 Varnishing (unpainted woodwork).
 Doping.
 Sand-papering.
 Attaching external fittings to planes, etc.

Fusilages.

Assisting assembling of sides in jigs.
 Cleaning up assembled sides.
 Attaching fittings to fusilage sides.
 Wiring up and riveting bolts.
 Varnishing.
 Assisting in final assembling of fusilage (craftsman's mate).
 Assembling and making small repetition parts. *e. g.*, camera boxes, brackets, seat boxes.
 Assembling under carriages.

Erecting Shop.

Mechanical assemblers, (*e. g.*, struts in planes, etc.)
 Wiring of machines.
 Splicing.
 Bolting and screwing assembled fittings and instruments to machines.
 Bolting fittings on planes.
 Riveting bolts.
 Offering up and bolting tail units in place.
 Offering up and pinning elevators and ailerons to planes.
 Attaching wiring skids to main planes.
 Assembling and attaching shock absorbers.

COMPLETE SCHEME OF TRAINING.

LIST OF SKILLED OPERATIONS.

Woodworking Section:—

Fusilage makers, viz. assembling the various sections, *e. g.*, sides of front portions, sides of centre portion, top and bottom of rear portions; assembling complete and truing-up.

Erection, Proper:—

Fitting up and fixing of the body, instrument board and fittings, fairings, landing gears, skids, fins, rudder, bottom and rear portions, top centre portion, and planes.

Body and Fairing Making.

General Assembly of all Main Parts.

General Assembly of the More Skilled Detail Parts.

Including main plane struts with ferrules and forked ends, body struts, flap control struts, landing gear struts, &c.

Making of Landing Gear Complete.

Including fitting up and fixing struts, fairings and all fittings.

Making of Hollow Spars and Struts.

Setting Out of all Detail Work and Parts for Assembly.

Wood Machinists.

Spindles.
 Four cutters.
 Planers.
 Circular sawyers.
 Band sawyers.

Erectors: including erectors of engines, engine fittings, controls, timing gears, and fitting in guns.

BOOT AND SHOE MANUFACTURING TRADE.

As a result of the development and use of specialized machinery and tools, many of the processes are of a comparatively simple character, not calling for great physical exertion and suitable for the employment of disabled men of a fair degree of intelligence. The work is not heavy, but requires concentration and adaptability.

The operations generally require the full use of hands and arms, but many operations would be suitable for a man with an artificial leg, provided he is able to stand at his work.

SUITABILITY OF THE WORK FOR DISABLED MEN.

The following is a list of the processes suitable for disabled men:—

1. *Clicking Department.*
Pattern Grading, Hand Clicking, Clicking Presses and Power Eyeletting.
2. *Rough Stuff Department.*
Cutting Presses, Rollers, Grading Machines and Splitting Machines.
3. *Preparation Department.*
Sole Molder, Out-sole and In-sole Channelling Machines, and Power Skiving.
4. *Making Department.*
Pull-over Machines, Consol Laster, Hand Laster, Pounding Machines, Blake Sewing, Standard Screwing, Loose Nailers, Stitching Machines, Levellers, Heel-attaching Machines, Loose Billing, Universal Sluggers, Welt Sewers, Sole Layer and Rough Rounder.
5. *Finishing Department.*
Heel Trimmers, Edge Trimmers, Edge Setters, Heel Scourers, Heel Burnish-
ing Machines and Bottom Scourers.

PROCESSES.

Clicking Department.—For Pattern Grading, Hand Clicking and Power Eyeletting, both hands and arms must be uninjured but the operations would be possible for a man with an artificial leg. For the Clicking Presses young men are required whose hands, arms and legs are sound.

Rough Stuff Department.—For the Cutting Presses and Rollers young men are required whose hands, arms and legs are sound, but for the other operations the loss of a leg would not necessarily disqualify a man.

Preparation Department.—Sole Molders, Out-sole and Insole Channelling Machines and Power Skiving: these require the full use of hands, arms and legs and are more especially suitable for young men, but a man with an artificial leg would not be debared from taking up the work.

Making Department.—All operations in this Department, with the possible exception of Hand Lasting, are specially suitable for young men who, generally speaking, are sound in both hands, arms and legs. Hand lasting is also suitable for older men. *Rough Rounders and Welt Sewers are machines which should be confined to men who have had some previous experience in the trade.*

Finishing Department.—The operations of Heel Trimming, Edge Trimming, Edge Setting and Bottom Scouring are suitable for men with an artificial leg, but both hands and arms must be uninjured. Heel Scouring and Heel Burnishing Machines require young and active men whose hands and arms are sound, but an artificial leg would not necessarily disqualify.

TRAINING COURSE.

A.—PROCESS IN WHICH THE TOTAL COURSE OF TRAINING IS 12 WEEKS.

Name of Process.	Probationary period, i. e., first two weeks.	Name of Process.	Probationary period, i. e., first two weeks.
Power Eleyetting ...	In Technical School	Loose Billing	In Technical School
Rollers	"	Universal Sluggers ..	"
Sole Molder	"	Sole Layers	"
Power Skiving	"	Bottom Scourer	"
Pounding Machine ..	"	Grading Machine ..	"
Leveller	"	Splitting Machine ...	"

B.—PROCESS IN WHICH THE TOTAL COURSE OF TRAINING IS 16 WEEKS.

Name of Process.	Probationary period, i. e., first two weeks	Name of Process.	Probationary period, i. e., first two weeks.
Pattern Grading ...	In Technical School	Heel Attaching	In Technical School
Outsole and Insole	"	Machines	"
Channelling Ma-	"	Heel Trimmers	"
chines	"	Heel Scourers	"
Loose Nailers	"	Heel Burnishing Ma-	"
Stitching Machines ..	"	chines	"

C.—PROCESSES IN WHICH THE TOTAL COURSE OF TRAINING IS 28 WEEKS.

Name of Process.	Probationary period, i.e., first four weeks.	Name of Process.	Probationary period, i.e., first four weeks.
Clicking Presses	In Technical School	Standard Screwer ...	In Technical School
Cutting Presses	"	Welt Sewer	"
(Rough Stuff) ...	"	Rough Rounders	"
Pullover Machine ...	"	Edge Trimmers	"
Consol Laster	"	Edge Setters	"
Blake Sewer	"		

In the exceptional case where, in the opinion of the Local War Pensions Committee, the man cannot conveniently attend a Technical School or other approved Training Institute, the whole of the period of training appropriate to a particular process may be spent in a factory.

In the case of Hand Clicking the period of training shall be 52 weeks in a factory, during the first 26 weeks of which the disabled man shall spend, wherever possible, one day a week, or not less than 6 hours during each week, in a Technical School or approved Training Institute, provided always that such instruction is given in the usual working hours.

The probationary period in a Technical School shall be a trial period. If at the end of this period the man, in the opinion of the Local Technical Advisory Committee proves unsuitable for the trade, his training shall cease. The first month of training in a factory shall be a further trial period. If at the end of this period the man is, in the opinion of the employer, unsuitable for the trade, his training in that particular factory shall cease. If the man proves suitable for the trade, the employer shall agree to retain him in his factory until the end of the course of training, provided that, if either party to the agreement desire for some substantial reason at any time to terminate the agreement, the case shall be referred to the Local Technical Advisory Committee, which shall have power, after hearing evidence, to advise that the agreement be terminated. Where no such Local Technical Advisory Committee exists the matter shall be referred to the Trade Advisory Committee.

BOOT AND SHOE MAKING (*Hand Sewn*) AND BOOT AND SHOE REPAIRING.

Boot and Shoe Repairing is one of the most widely distributed of trades; every place of any size has its repairers, and openings may, therefore, present themselves near the homes of disabled men.

It is carried on either (i) by hand alone, or (ii) with the aid of two or three machines, or (iii) in large factories. At present the greater part is done by machines in small or medium-sized workshops. Repairing by hand alone is still done, however, on a large scale. This includes (a) repairing in villages, (b) repairing in towns—both in medium-class work and in high-class work.

Both in Hand-sewn Boot and Shoe Making and in Boot and Shoe Repairing special care should be exercised before any offer from employers to teach disabled men is accepted, to ensure that both efficient teaching and adequate prospects are forthcoming. The men suitable for employment fall into two main classes:

- (i) those not able to stand continuously at their work.
- (ii) those able to stand continuously.

The men in class (i) should be taught hand boot and shoe making and repairing in all branches, and riveting and finishing. Men in class (ii) should be taught hand boot and shoe making and hand repairing as the best introduction to machine boot and shoe repairing. At the same time, they should also be taught the use of the machines used in the repairing trade, in view of the fact that a large amount of repairing is already done by machinery and that this method may possibly grow in the future.

SUITABILITY OF THE WORK FOR DISABLED MEN.

The following is a list of the processes suitable for disabled men:

1. Hand-Sewn Boot and Shoe Making.
2. Hand Repairing.
3. Machine Repairing:—
 - (a) Bench work.
 - (b) Machine stitching and sewing (repairing only).
 - (c) Finishing.
4. Clogging.

PROCESSES.

1. *Hand-sewn Boot and Shoe Making and* (2) *Hand Repairing*.—This work can be done sitting and would be quite suitable for a one-legged man. Full use of both hands and arms is needed, but the loss of one or two fingers would not necessarily disqualify. Good eyesight is required. Men suffering from shell shock may in some cases be likely to find this a suitable occupation, but it is not recommended for men with a tendency to consumption.

3. *Machine Repairing*.—This includes three processes, viz., (a) Bench Work, (b) Machine Stitching and Sewing (Repairing only), and (c) Finishing.

(a) *Bench Work*.—Comprises the taking off of the old sole and top piece of the heel, including channelling soles ready for stitching or blake sewing, or inserting rivets if the repair is not being sewn or stitched; also inserting rivets in the top of the heel. It is done either standing or sitting, but in other respects the requirements are the same as those for hand making and hand repairing.

(b) *Machine Stitching*, as a process of repairing, consists of operating the Sole-sewing Machine in cases where the sole has been channelled for that purpose. It is done standing, and often a treadle has to be compressed by the right leg to start the machine and held down during the operation. Both hands are required to hold and guide the boot. The work is light and there would be only slight vibration.

(c) *Finishing* boots and shoes by machinery is principally done while standing, but the machine can also be adapted so as to be worked while sitting. It requires the use of both arms and hands, but little or no movement of the legs or body. The work is not heavy but it is not recommended for a man with a weak heart or a tendency to consumption.

PROSPECTS.

The demand at present is good, but it must be remembered that the vacancies created by war casualties are likely to be less in this trade than in some other trades, owing to the number of enlisted men who are employed behind the fighting lines upon boot repairing.

SYLLABUS OF INSTRUCTION FOR TRAINING SCHOOLS AND WORKSHOPS.

HAND-SEWN BOOT AND SHOE MAKING AND BOOT AND SHOE REPAIRING.

Anatomy.—Elements of the Anatomy of the foot: joints, muscles, levers, skin, etc. (normal and abnormal developments).

Measurement.—Theory and practice of foot measurement; points of measurement; how to take a plaster cast and impression of the sole; lengths and fittings, etc.

Pattern Cutting.—Pattern Cutting, pitch and inclination; the vamp, etc.

Lasts.—General principles of lasts; the importance of standard measurements, right shape, half sizes; faults of lasts and their effects; last fitting; special forms of iron lasts; insteps, bunions, treading over, etc.

Hand-sewn Work.—The making of men's, women's and children's boots and shoes of all kinds. Making shoes to order or specials; leather and Louis heel, and turn-shoe making.

Riveted Work by Hand.—All classes of work, including putting up and finishing.

Pegged Work by Hand.—Special attention to "bracing" for heavy country work for farmers, etc.

Bench Work, Hand and Machine.—Ranging, sole cutting, stripping off, tacking on, paring and shaping; channelling by hand or machine; blake sewer and stitching.

Repairing by Hand.—Welted work, soleing, sewn on, re-stitched, grafting, clump, and soles solutioned on. Soleing under heel, re-sewing old welts, new welts, piece welts, re-lasting; stitching uppers (stabbing). Stabbed patches, cemented or invisible patches; new vamps, toe caps, back linings, and back straps, blinded top pieces, inserted rubber or iron tips, and iron plates; veldt-schoen, turn shoe, etc.

Finishing by Hand.—The importance of maintaining correct shape and appearance; the use of double irons, etc.

Finishing by Machinery.—Edge trimming cutter, edge setting, scouring, brushing and padding, etc., in addition to the previous section.

Gutta-percha Work.—Soleing and heeling of sea boots, over-shoes, and Plimsolls.

SYLLABUS OF INSTRUCTION FOR WORKSHOPS.

BOOT AND SHOE REPAIRING.

Lasts.—General principles of lasts; the importance of standard measurements, right shape, half sizes; faults of lasts and their effects; last fitting; special forms of iron lasts; instep, bunions, treading-over, etc.

Riveted Work by Hand.—All classes of work.

Pegged Work by Hand.—Special attention to “bracing” for heavy country work by farmers, etc.

Bench Work, Hand and Machine.—Ranging, sole cutting, stripping off, tacking on, paring and shaping, channelling by hand or machine; blake sewer and stitching.

Repairing by Hand.—Wetted work, soleing, sewn on, re-stitched, grafting, clump, and soles solutioned on. Soleing under heel, re-sewing old welts, new welts, piece welts; re-lasting; stitching uppers (stabbing), stabbed patches, cemented or invisible patches; new vamps, toe caps, back linings, and back straps, blinded top pieces, inserted rubber or iron tips, and iron plates; veldt-schoen, turn shoe, etc.

Finishing by Hand.—The importance of maintaining correct shape and appearance; the use of the last; use of double irons, etc.

Finishing by Machinery.—Edge trimming cutter, edge setting, scouring, brushing and padding, etc., in addition to the previous section.

Gutta-percha Work.—Soleing and heeling of sea boots, over-shoes, and Plimsolls.

CINEMA TRADE.

In order that the training of disabled men may be so regulated as not to conflict with the interest of employers and employed in the Cinema Trade, the Minister of Pensions has, after consultation with the Ministry of Labour and Cinema Trade Advisory Committee, laid down in accordance with Instruction 23 under Article 6 of the Royal Warrant of March, 1917, the following conditions to be observed in regard to the training of men as Cinema Operators, hereafter to be deemed a “Special Trade” for the purposes of that Instruction.

Any course of training already being given or proposed to be given by a Local War Pensions Committee shall, if the allowances or fees under Article 6 of the Royal Warrant are to be paid, comply with the following conditions, unless in any case the Minister of Pensions otherwise determines.

(1) Training in cinematograph operating may only be given at a centre that has been approved by the Minister of Pensions.

(2) The course of training at any centre shall be for a maximum period of 13 weeks, and shall consist partly of theoretical instruction at a technical school or similar institution and partly of practical teaching in projection. Such instruction shall be for a period of not less than 30 hours per week.

N.B.—The Cinema Trade Advisory Committee will issue a certificate to men who have gone through a course of training and who have passed an examination to the satisfaction of the Local Technical Advisory Committee, in accordance with the conditions laid down by the Cinema Trade Advisory Committee.

CLOTHING MANUFACTURE (Wholesale).

Wholesale clothing manufacture includes the following branches:

- (a) Ready-made Tailoring or the manufacture of cloth garments on a large scale irrespective of the requirements of individual wearers.
- (b) Wholesale Custom Tailoring or the manufacture of clothing in wholesale factories but according to the measurements of individual customers.

In both cases the work is mainly performed by power-driven machinery and is much sub-divided.

GENERAL PROSPECTS.

The manufacture of wholesale clothing was on the increase prior to the war, and it is possible that a large demand may arise after its termination owing to the suspension of production in the case of civilian clothing both for home and export trade.

SUITABILITY OF WORK FOR DISABLED MEN.

It is suggested that a disabled man might suitably be trained in one or other of the following branches of the Wholesale Clothing Trade:—

- (1) Cutting and Trimming.
- (2) Pressing (Hand and Machine)—
 - (a) Under pressing and smoothing seams.
 - (b) Pressing off and finishing.
- (3) Warehousemen.

All these processes are carried on in an equable temperature and under healthy conditions. In the case of handpressing, however, the atmosphere is somewhat hot and damp and, where gas irons are used, charged with fumes, which makes the work undesirable for men with chest affections.

Various degrees of physical skill are needed for the different operations. Thus, cutting involves work of a fairly light character, though occasionally heavy weights have to be lifted. In hand-pressing, considerable physical strength is required, since the work involves the use of a goose iron weighing from 14 to 20 lbs., while warehouse work may involve the lifting of heavy weights.

None of the above branches are of a sedentary nature, but should not be impossible for a man with more or less serious leg injury, or for a man with an adequate artificial leg.

The use of both hands is essential, but the loss of one or two fingers on either hand, provided that the thumbs are uninjured, should not be a great obstacle.

N. B. 1.—The work of warehouseman offers opportunities to an intelligent man, since from this branch a man of exceptional ability might rise to the post of traveller or to a position on the management. On the other hand, the work is also suitable for men of less intelligence who would be incapable of learning the more skilled processes of the trade.

N. B. 2.—The work of "passing" would offer an ideal opportunity for a disabled man formerly engaged in the trade for whom light and sedentary work is necessary. The opening is, however, a small one, and "passers" are generally recruited from experienced tailors.

In England training is divided into two periods—the first with maintenance allowances is spent partly in a technical school and partly in a factory, if a technical school is available—3 months being spent in a technical school and 3 months in a factory. If a technical school is not available, the training may be given in a factory for a period of 4 months. The second period of training without maintenance comprises 6 months, but if the first or trial period was spent in a factory only, then the second period of training shall be for 5 months.

Training in Wholesale Tailoring is given only in the following processes:—

- (1) Cutting and Trimming.
- (2) Pressing (Hand and Machine).
 - (a) Underpressing and Smoothing Seams.
 - (b) Pressing Off and Finishing.
- (3) Warehousemen.

The first month of training in the technical school and in the factory shall be a trial period. In the case of technical school training, if at the end of the trial period the man, in the opinion of the Local Technical Advisory Committee, proves unsuitable for training, his training shall cease. In the case of factory training, if the man, in the opinion of the employer, proves unsuitable, his training in that particular factory shall cease. If the man proves suitable for the trade the employer shall agree at the end of the trial period to retain him in his factory until the end of the course of training, provided that, if either party to the agreement desire for any substantial reason at any time to terminate the agreement, the case shall be referred for settlement to the Local Technical Advisory Committee, which shall have power, after hearing evidence, to advise that the agreement be terminated. Where no such Local Technical Advisory Committee exists the matter may be referred to the Tailoring Trade Advisory Committee.

SYLLABUS OF INSTRUCTION FOR TRAINING IN TECHNICAL SCHOOLS.

The aim of the following short course of instruction is to give a man a good general knowledge of the usual methods and organization of the Wholesale trade. It is not intended to qualify a man for a specialized post, but to equip him with such a knowledge of the various processes (especially those in which men are employed) that he may adapt himself easily and with intelligence to any post which the circumstances of the particular factory in which he finds employment may open to him.

With this end in view it is felt that the course of instruction should begin with an account and explanation of the various processes necessary in the making of a garment, the various kinds of cloth, linings, &c., the different parts and styles of garments, and the technical terms in common use.

Afterwards he should be taught how to handle shears, and from this point he should proceed to instruction in Marking-in, an operation which, up to a certain

stage of usefulness, could well be taught under Technical School conditions, and which, affording as it does an opportunity for practical work and the acquisition of a degree of skill, will occupy the greater part of the student's time.

Though, for the reasons stated, the course appears to lay special stress upon Marking-in, the aim of the instruction in giving a man some knowledge of the trade in general should not be lost sight of; and among the processes through which a garment passes in the course of manufacture some could be selected for special attention beyond the oral instruction which will occupy the first two weeks.

Much of the Syllabus can be covered by blackboard demonstrations. For practical work pieces of cloth should be provided. Chalk marks can be removed by a brush and the pieces used repeatedly. The pieces should include those kinds of cloth—striped, check and faced—which present special difficulties, but for the general purposes a scarlet cloth is probably the most suitable. The equipment of the school should also include bunches of patterns illustrative of various kinds and designs of cloth, linings, canvases, &c.

In the practical work and, indeed, in all stages of instruction, emphasis will be placed on the need for economy in the use of cloth, the success of wholesale methods of manufacture resting very largely on the principle that even a fraction of an inch of cloth saved on each garment may in the aggregate represent a considerable sum.

SYLLABUS.

(12 weeks of 39 hours per week.)

(Monday—Friday, 7 hours; Saturday, 4 hours.)

The whole of Part A of the Syllabus should be gone over during the first fortnight, but the instructions should be continued throughout the whole of the course, an hour each day or two or three times a week being given to recapitulation and to such special points as practice in handling and identifying various kinds of cloth and linings.

The processes of fitting-up and pressing should also receive special attention. They do not admit being taught with any thoroughness except in a factory where garments are handled in quantities, but in some cases the equipment of the school may make it possible to provide within certain limits some practical work in addition to theoretical instruction, and it is recommended that such possibilities should be utilized.

During the first two weeks, when instruction may be wholly or mainly oral, the hours of attendance may be somewhat less than provided for, if it is found that there would otherwise be difficulty in maintaining keenness of interest.

A. General Instructions in:—

- (a) Names and styles of various garments.
- (b) Technical names of each portion of garment.
- (c) Identification of each portion of garment when seen in block pattern.
- (d) Construction of each garment.

Instruction in (d) should cover the following points:—

Receiving instruction as to style of garment and sizes to be produced, noticing details as to requirements with regard to pockets, linings, number of buttons, &c.

Finding the necessary block patterns and cloths (cloths in most instances are found by storekeepers).

Marking the lay from block patterns or perforated lay—whichever in use.

Laying up the cloth to produce the necessary sizes ordered.

Cutting the garment by shears, band-knife or slot-knife.

Marking and cutting the linings, pockets, canvas, linen, &c.

Sorting and tying-up the cutout garments in suitable bundles.

Fitting-up, i. e., assembling and preparation of the various parts of the garment for the machinists. Shaping and adjustment of flaps, welts, collars, facings and linings. Allowances for turnings and seams. Position of pockets.

Machining.

Under-pressing.

Button-holing and buttoning.

Pressing.

Chief methods followed in various factories in preparing garments for pressing.

Purpose and principles of pressing.

Cleaning.

Despatch of garments to warehouse.

Practical work. Use of shears. Practice in selecting and naming parts of garments and recognizing styles and sizes. Fitting-up. Preparing garments for pressing.

B. Instruction in Marking-in.

Method of laying block patterns on material and chalking round same with a view to economy in use of material and the production of a satisfactory and correct garment.

Practical work in laying patterns on plain, striped, check and faced cloth of standard and varying width.

DENTAL MECHANICS.

The Dental Mechanic is as a rule employed in the private laboratory of a dentist to make dentures (artificial teeth), crowns for natural teeth, splints for fractured jaws, and various other dental appliances for individual patients in accordance with the directions of the dentist.

Before a man can become a good mechanic, he has to acquire skill in certain technical processes. These processes include the handling of plaster of Paris as used in the making of fine casts, the melting and casting of metals, the accurate fitting of sheet metal to irregular surfaces, the use of the blow-pipe, wax modelling, the manufacture and polishing of vulcanite, and the exact and artistic adaptation of porcelain teeth to the needs of cases, no one of which is exactly like another.

All this requires patience and application, and much practice under competent instruction; but the work offers attraction in the variety of its technique, in the ingenuity and initiative for which it affords opportunities, and in the certainty of a good and steady wage in the case of a man possessing aptitude and character.

SUITABILITY OF THE WORK FOR DISABLED MEN.

The work requires quick intelligence and delicacy of touch, resembling in this respect certain branches of the jewellery trade. Mechanical aptitude is necessary, and men should only be selected who can give evidence of the possession of some skill in handicraft, or who have not lost, through age or previous occupation, the capacity for acquiring such skill.

The work is largely done sitting, but a man must be able to do a little walking and also to stand at intervals at his work, without support from his hands. In some laboratories a treadle has to be used for polishing.

The use of both arms and both wrists is required, though the loss of a few fingers would not necessarily disqualify, provided the man has the full use of the thumb and first two fingers on the right hand, and of at least the thumb and first finger of the left hand, so that he can exercise a firm grip with both hands. Good eyesight in at least one eye is necessary.

The work is light, though a little hammering is involved, and sufficient strength to close a vice or press is necessary. It is done indoors, and is only suitable for men who are free from tuberculosis.

The dental mechanic does not as a rule spend his time in a workshop under constant supervision, but works, often alone, in the laboratory of a private house; and he must therefore possess the qualities of character and disposition necessary for employment under such conditions.

RULES FOR TRAINING IN ENGLAND ARE AS FOLLOWS.

1. The maximum period of training as a dental mechanic shall be one year.
2. This period may be spent either—
 - (a) wholly in a technical school or similar institute under a scheme approved by the Minister of Pensions; or
 - (b) during the first six months in a technical school or similar institute followed by six months in the private laboratory of a registered dental practitioner, provided that the facilities for instruction are adequate or
 - (c) in areas where there is no technical school or similar institute or where such school or institute is not reasonably accessible to the man, wholly in the private laboratory of a registered dental practitioner, provided that the facilities for instruction are adequate.
3. The first month of training whether in the technical school or in the private laboratory shall be regarded as a trial period. In the case of technical school training, if in the opinion of the Local Technical Advisory Committee the man is unsuitable for the trade his training shall cease at the end of this trial period. In the

case of private laboratory teaching, if in the opinion of the dentist the man is unsuitable his training in that private laboratory shall cease at the end of this trial period. If the man prove suitable at the end of the trial period the dentist shall agree to retain him until the end of the period of training, provided that if either party desires for some substantial reason at any time to terminate the agreement the case shall be referred to the Local Technical Advisory Committee, if any, which shall have power after inquiry to terminate the agreement. Where there is no Local Technical Advisory Committee for the area concerned, the case may, if the Local War Pensions Committee so desire, be referred to the Trade Advisory Committee (Dental Mechanics).

4. Where training is given by a registered dental practitioner in his own laboratory the employer pays the man on a certain graduated scale.

SYLLABUS OF TRAINING.

The Trade Advisory Committee (Dental Mechanics) has prepared the following Syllabus specifying the kind of instruction and equipment desirable for the training of disabled men whether in Technical Schools or in the private laboratories of registered dental practitioners.

The Syllabus is intended to be a guide to Local War Pensions Committees, Local Technical Advisory Committees, and other bodies who may be interested in the training of disabled men, as to the lines on which training should be given.

(a) *Course of Instruction.*

The course of instruction should include at least the following, viz.:—

1. *Plaster of Paris Work.* Pouring, separating, trimming, hardening models.
2. *Impression Trays.* Making of routine and special swagging, casting.
3. *Articulators,* making and use of.
4. *Founding* casts, dies, impression trays.
5. *Vulcanite Work,* modelling, flasking, packing, finishing, repairing.
6. *Porcelain teeth,* adaptation, fitting of various types.
7. *Plate work,* swagging, strengthening, soldering bands and clasps, repairing.
8. *Pressure Casting.*
9. *Springs and Swivels.*

(b) *Equipment of Laboratories.*

The equipment of laboratories should include the following, viz.:—

1. *Good supply* of water, gas, electricity.
2. *Benches* for general work and plaster and founding.
3. *The requisite Hand Tools.*
4. *Lathes,* grinding and polishing.
5. *Dental Furnaces.*
6. *Vulcanizers, Flasks, Vice and Press.*
7. *Pressure Casting* apparatus.
8. *Plaster Casts* for teaching purposes.

ENGINEERING.

The Engineering Trade is one of the most widely spread of all Industries, and is carried on in all parts of the country in close relationship to practically every other form of industry. As one of the "key" industries, it plays a very important part in the economic life of the country, and predominates in large industrial centres, where it is allied to other important industries.

The nature of the productions of the Engineering Trade varies considerably, largely in accordance with the districts, and there is a corresponding difference in the nature of the qualities required from the operatives. Much of the work is heavy; but, on the other hand, very considerable quantities of goods are manufactured which are light and easy to manipulate. There are machine, bench and other hand operations; some machines are light, and can be operated by one-armed men; others are heavy and require a man of practically full physical capacity. For the bench operations generally, a man must be able to stand at his work.

In this Report are issued the schemes for the training of disabled men in certain light machine operations and the training of craftsmen in certain trades.

SUITABILITY OF THE WORK FOR DISABLED MEN.

The following is a list of the processes suitable for disabled men:—

I. *Minor Machine Operations*: for example—

1. Capstan Lathes.
2. Light Drilling.
3. Grinding.
4. Milling.
5. Light Planing.
6. Shaping.
7. Slotting.
8. Screwing.
9. Sawing.
10. Boring.
11. Power Presses.

II. *Skilled Trades*.—

1. Coppersmithing.
2. Fitting, Turning, and Brass Finishing.
3. Moulding.
4. Patternmaking.

ANALYSIS OF THE PROCESSES.

GENERAL.

Minor Machine Operations.—

For the machine operations generally, a man must be able to stand, although in some cases arrangements can be made for him to sit at his machine. Full use of one hand and arm is necessary while the other may be damaged. In some cases the adjustment of an appropriate hook to an artificial arm has proved satisfactory. A man with an artificial leg would not be disqualified provided he can move about freely.

Skilled Trades.—

It is intended that a man should start on the light operations in the various trades. The full use of both hands and arms is generally required but the loss of one or two fingers would not necessarily disqualify a man. It is usually necessary that the man should be able to stand at his work. Good eyesight is generally required, but the loss of one eye would not debar the man. These trades as a rule are not suitable for men suffering from any pulmonary complaints. Discretion should be exercised in selecting men for operations which are noisy.

I.—*Minor Machine Operations*.

1. *Capstan Lathes*.—This is generally light work. The man would have to stand at his work; full use of both arms and ability to move the body freely is necessary. Loss of fingers on either hand or minor bodily disablements would not necessarily disqualify.

2. *Light Drilling*.—This is a very suitable operation for a disabled man provided he has full use of his right hand and arm and partial use of the left. In many instances he can sit at his work.

3. *Grinding*.—Generally speaking this is a light operation. The man must be able to stand at his work and have full use of his right arm and hand, with partial use of left. Dry Grinding work would not be suitable for a man suffering from any pulmonary complaint.

4. *Milling*.—This operation varies very considerably according to the different types of machines, but on the whole it may be stated to be light rather than heavy, although both classes of machines are involved. A man must usually be able to stand at his work, and generally the use of both arms and hands is required.

5. *Light Planing*; 6, *Shaping*; 7, *Slotting*.—These are very suitable operations for disabled men. Full use of both arms and hands is generally required, but the loss of one or two fingers and minor bodily disablements would not necessarily disqualify a man. A man with an artificial leg would be suitable provided he can stand at his work.

8. *Screwing*.—Full use of both arms and hands is generally required but the loss of one or two fingers would not necessarily disqualify. A man with an artificial leg would be suitable provided he is able to stand at his work.

9. *Sawing*.—A man must be able to move about freely, and generally have full use of both hands and arms. The loss of one or two fingers would not necessarily disqualify.

10. *Boring*.—This work is of a very varied character. A man must usually be able to stand at the machine and have full use of both arms and hands. The loss of one or two fingers and minor bodily disablements would not necessarily disqualify a man.

11. *Power Presses*.—These vary considerably in size and type, while the work varies from light to medium and heavy in character. The right arm and hand are used much more than the left. A man with an artificial left arm might be employed provided the necessary adjustment is made in the controlling levers. This is considered practicable, especially in the case of double control. A man would in many instances be able to sit at his work.

II.—*Skilled Trades*.

1. *Coppersmithing*.—This covers a variety of operations which are not generally heavy but involve a good deal of hammering and bodily movement. The man must be able to move about freely and have full use of both arms. The loss of one or two fingers would not necessarily disqualify.

2. *Fitting, Turning, and Brass Finishing*.—A man must generally stand at his work and have full use of both arms and hands. A man with an artificial leg would not necessarily be disqualified provided he has complete control over the limb.

3. *Moulding*.—This is work requiring the full use of both hands and arms, but the loss of a finger would not necessarily disqualify. The man must be able to stand continuously at his work, and to move about freely. Generally unsuitable for a man with an artificial leg.

4. *Patternmaking*.—The use of both hands and arms is required; the loss of one or two fingers would not necessarily disqualify a man, but he must have full use of the thumb. He must be able to stand continuously at his work and be able to move about freely. Good eyesight is required, but the loss of one eye would not necessarily debar a man from taking up this trade.

PROSPECTS

These trades have been exceptionally busy during the war and the demand for men has been continuous. It is believed that after the war the trades will continue busy and that the demand for qualified craftsmen will provide a reasonable prospect of continuity of employment.

SCHEME I.—MINOR MACHINE OPERATIONS.

1. The period of training is 52 weeks. The first 13 weeks with maintenance shall be spent in a Technical School or similar institute, or a factory or workshop, as may be determined by the Local Technical Committee. The remaining 39 weeks (without maintenance) shall in all cases be spent in a factory or workshop.

2. The first month of training in the workshop shall be a trial period. If at the end of this trial period the man is considered by the employer as unsuitable for the trade, his training shall cease, provided that he shall have the right to appeal to the Local Technical Advisory Committee for his training to be continued elsewhere. At the end of the trial period, if the man proves suitable for the trade and he agrees to remain, the employer shall agree to retain him in his workshop until the end of the course of training, provided that if either party to the agreement desire for some substantial reason at any time to terminate the agreement, the case shall be referred for settlement to the Local Technical Advisory Committee who shall have power, after hearing evidence, to advise that the agreement be terminated.

3. The minor machine processes to which the twelve months' course of training shall apply are one or more of the following: Capstan Lathes, Light Drilling, Grinding, Milling, Light Planing, Shaping, Slotting, Screwing, Sawing, Boring and other similar machines, and Power Presses.

SCHEME II.—SKILLED TRADES.

1. Training by way of apprenticeship in the Engineering Trades shall only be given where the employer undertakes to give the disabled man an all-round knowledge of one of the following trades: Coppersmithing; Fitting, Turning and Brass Finishing; Moulding; and Patternmaking.

2. The period of training shall be three years. The first eighteen months shall be a period of Training with Maintenance, the second eighteen months shall be an Improver's Period without Maintenance.

3. Such training may only be given to men who were 22 years of age or under at the commencement of the war, unless in any case the Local Technical Advisory Committee advise otherwise.

4. The first six months of the training shall, apart from the exceptional cases mentioned in Instruction 5, be spent in a Technical School or similar institute, under a scheme approved by the Minister of Pensions.

5. Where, in the opinion of the Local War Pensions Committee (on the advice, if possible, of the Local Medical Referee), the man's disabilities are such as not to require further medical treatment, and where the usual hours and conditions of factory life will not be injurious to the general health of the disabled man, the first six months of training may be spent in a factory or workshop.

6. The remaining two and a half years shall in all cases be spent in a factory or workshop.

7. The first month of training, both in the Technical School and in the factory or workshop, shall be a trial period. In the case of Technical School Training, if at the end of the trial period the man, in the opinion of the Local Technical Advisory Committee, is considered unsuitable for the trade, his training shall cease. In the case of the factory or workshop training, if at the end of the trial period of one month the man is considered by the employer as unsuitable for the trade, his training shall cease, provided that he shall have the right to appeal to the Local Technical Advisory Committee for his training to be continued elsewhere. At the end of the trial period, if the man proves suitable for the trade, the employer shall agree to retain him in his workshop until the end of the course of training, provided that if either party to the agreement desire for some substantial reason at any time to terminate the agreement the case shall be referred for settlement to the Local Technical Advisory Committee, who shall have power, after hearing evidence, to advise that the agreement be terminated.

8. At the conclusion of the full period of training the disabled man shall be regarded as a skilled workman in the trade, and the wages to be paid shall be the rate of wages applicable to the skilled workman in that trade in the district in which he is employed.

THE FURNITURE TRADE.

Owing to the development and use of highly specialized machinery and tools a system of construction has been evolved which renders the manufacturing of some kinds of furniture that are now being made a comparatively simple process, not calling for any excessive physical exertion and suited for the employment of disabled men of a fair degree of intelligence.

The principal openings for the employment of disabled men will be found in the large furniture factories. The type of instruction should be in harmony with the modern system of furniture manufacturing where machinery enters so largely into the system of construction.

SUITABILITY OF THE WORK FOR DISABLED MEN.

Of the undermentioned processes (1 to 13 below) generally it may be said that a man with one leg (replaced by artificial limb) would not be severely handicapped. All are performed under cover and the work entailed is not of a heavy nature. There are a few processes at which a man who has lost two or three fingers or even a thumb could work, while in French Polishing a suitable man might possibly be employed who has lost a hand, though in such cases the loss would be a handicap.

1. LINING OR MARKING OUT OF TIMBER.

This work is done in a great many cases by men with an all round knowledge of the trade, but some shops afford an opening for disabled men. Such men would be under the supervision of the Foreman in Charge of the Timber Yard or Machine Department.

Suitability.

Given that arrangements are made to bring the planks to the liners there seems no reason why this work should not be suitable for one-legged men.

2. MACHINE WORK.

(e.g. Sawing, Planing, Moulding, Jointing, Boring, Dovetailing, and Sanding Machines and attending Automatic Carving, Turning Saw Sharpening and Tool Grinding Machines.)

Many of the machines in use do light, simple processes, are quite safe to use, and have guards or fences to protect the workman. In many of the factories the

saws, cutters, plane irons, &c., are in charge of a skilled workman, who is responsible for the setting and sharpening of same. A comparatively short training should enable a man to operate an ordinary machine quite satisfactorily.

Suitability.

Where effective guards are provided most of these machines are such that one-legged men or men injured in the leg could operate without difficulty.

But it must be remembered (1) that a machine such as the spindle would be dangerous for a man who was not firm on his feet, (2) that the constant standing involved is very trying to men suffering from an injury to the muscles or ligaments of the leg. This is specially the case with machines at which the operators stand sideways to push the wood through, such as the Overhand Planer and Circular Saw.

At one or two machines, *e.g.* the Vertical Borer, Fret Saw, Carving Machine, it should be possible to provide for the operators to sit.

As regards other disabilities, the following points are to be noted:—

(1) The full use of both arms is essential in the case of all machinists; (2) Good hearing, though not essential, is a considerable help to a machinist, as it enables him to know whether the machine is running properly or not; (3) The machine shop is unsuitable for men suffering from neurasthenia, shell shock and chest complaints.

Prospects.

There is a good present demand for wood machinists. The prospects after the war for wood machinists are bright, as the anticipated expansion in the furniture trade is likely to be most marked on the machine side.

3. WOOD TURNING.

The old fashioned foot-driven wood turning lathe is now largely discarded; and the modern belt-driven lathe is a great improvement. Much of the work is of a plain design and pattern and of a repetition character, which would permit of a man being quickly trained.

Suitability and Prospects.

As for machine work above.

4 and 5. CABINET AND CHAIR MAKING.

Some of the work of the Cabinet Maker and Chair Maker under modern conditions has been greatly simplified through the advances that have been made in recent years in machine construction and preparation of the materials. A man of ordinary skill could very readily be trained; the main essential would be instruction in the use of the tools required and their maintenance in good order.

Suitability.

Some of the work is of a quiet nature, suitable for one-legged, or one-eyed or deaf men; also for men suffering from neurasthenia or certain forms of shell shock.

Prospects.

Cabinet Making and Chair Making present opportunities for the employment of a certain number of disabled men.

6. CARVING AND INLAY.

Suitability.

As for Cabinet Making.

Prospects.

The application of Carving and Inlaying to Furniture is subject to the influence of change of fashion. In recent years much of the Furniture manufactured has been without carving, and when it has been applied it is in many instances of a subdued and reserved description. The use of automatic carving machines has made the acquisition of the necessary skill comparatively easy; and, although the demand for men for carving and inlay work is limited, any man with an aptitude should be encouraged to apply as he could be quickly taught the elementary branches of the trade.

Such training, however, would be of no use for the higher grades of carving.

7. SANDPAPERING (BY HAND).

In nearly all factories the Cabinet Maker sandpapers his own work; in some chair making centres the chairs are sandpapered by women and boys. The opening for men would be very limited.

Suitability.

Considerable right arm pressure is required, involving strain on the legs, but it is possible that a man with one leg replaced by a wooden leg would not be handicapped.

8. FRENCH POLISHING.

In many centres in the North of England, girls and women are employed principally upon chairs. For the polishing of Cabinet Furniture a high degree of skill is necessary; and good physical condition with the free use of the right hand and arm is indispensable.

Suitability.

In carcase work a man with an artificial left arm would not be handicapped in polishing the heavier articles of furniture; it is to be noted that in France one-armed men have been trained as French Polishers during the war.

As regards other disabilities polishing would not be a good trade for those suffering from a weak heart. The atmosphere of a polishing shop is invariably warm, free from dust but often stuffy. It would be suitable for rheumatic cases and for men suffering from gassing or shell shock.

9. UPHOLSTERY.

The stuffing of loose seats for chairs is a simple process that could be readily acquired, also pin seat or skate stuffing and full spring stuffing of small and arm chairs.

The same remarks apply to mattress making and the cutting of loose covers.

Suitability.

This is for the most part a sedentary occupation suitable for one-legged men. Other disabilities which would not handicap a man severely are loss of an eye, deafness, neurasthenia, shell shock or rheumatism. Men suffering from chest complaints should not be introduced on account of the dust from the flock, &c.

10. TRACING, DRAWING AND DESIGNING.

The openings for the above are very limited, but might be found for men who had a natural gift for drawing.

Suitability.

This being entirely sedentary work is most suitable for men badly injured in leg or thigh. Other disabilities which would not handicap a man would be deafness, neurasthenia, shell shock, chest complaints or rheumatism.

11. GLASS BEVELLING BY MACHINERY.

12. SURFACE POLISHING OF MIRRORS.

13. GLASS COPPERING, VARNISHING (BUT NOT SILVER MIXING) OF MIRRORS.

Suitability.

Only men in a sound state of health should be introduced on account of the damp and dust involved. Deafness or loss of a leg replaced by wooden would not be a severe handicap.

COURSES OF TRAINING IN ENGLAND.

Compliance with the following conditions is necessary unless, in any case, the Minister of Pensions otherwise determines.

1. The course of training in any process shall be divided into (a) a Probationary Period; (b) an Improver's Period.

2. In all processes with the exception of glass processes, the Probationary Period shall be spent in a technical school, under a scheme approved by the Minister of Pensions, wherever, in the opinion of the Local War Pensions Committee, the man could conveniently attend such a course.

3. Where the man cannot, in the opinion of the Local War Pensions Committee, conveniently attend a course in a technical school, training during the Probationary Period may be given in a factory or workshop.

4. The Improver's Period shall be spent always in a factory or workshop.

5. In the case of each process the length of training and the minimum rate of wages payable by the employer to the disabled man (wherever the training is given in a factory or workshop) are outlined:

TRAINING COURSE.

Name of Process.	Length of Probationary period in weeks.
Drawing and designing (only for men specially gifted).	52
Carving and inlay	26
Upholstery	26
French polishing	26
Cabinet-making	26
Chair-making	12
Machine work	12
Wood turning	12
Lining or marking out of timber..	12
Sandpapering by hand	4
Glass bevelling, machine process..	4
Surface polishing of mirrors.....	4
Cleaning, coppering, varnishing, and silvering of mirrors (but not silver mixing)	4

SYLLABUS OF INSTRUCTION IN THE FURNITURE TRADE FOR DISABLED SAILORS AND SOLDIERS DURING THE COURSE OF TRAINING.

Lining and Marking out of Timber.

When the training is given in a Technical School it is desirable that short lectures on, and demonstrations of, the following matters should be held:—Drying, seasoning, quartering, conversion, growth, difference between heart side and inside of boards, suitability for various purposes, geometry, cross-cutting, used of molds and templates.

The practical course of instruction, whether given in a Technical School or in a factory or workshop, should include:—

- Selection and suitability of timber.
- Avoidance of shakes, knots, wormholes, sap.
- Soured wood and defective heartwood.
- Allowance for shrinking in seasoning.
- Marking and lining out to avoid waste.
- Matching up wood for jointing.

Machine Work.

When the training is given in a Technical School it is desirable that short lectures on and demonstrations of, the following matters should be held:—Principles of driving, adjustments of belts, transmission of power, calculation of speeds, general principles of machinery, geometry, cutter-making, various cutter blocks, including shearing cuts.

The practical course of instruction, whether given in a Technical School or in a factory or workshop, should include:—

- Setting and sharpening saws.
- Grinding and sharpening of planer and moulding machine knives and cutters.
- Sharpening of boring machine bits.
- Fitting up machines with saws and cutters.
- Instruction in sawing timber.
- Instruction in planing and moulding timber with the grain of the wood.
- Use of safety guides and fences, of pads and templates.

Wood Turning.

The practical course of instruction, whether given in a Technical School or in a factory or workshop, should include:—

- Grinding and sharpening of gauges and chisels.
- Centering of articles in lathe.
- Use of templates, callipers and gauges.
- Working to drawings and patterns.

The following is a list of the machines required in a well-equipped machine department for training:—

Band saw, circular saw, jointing saw, fret saw, surface planer, panel planer, spindle moulding machine (double), tenoning machine, mortising machine, dovetailing machine (with ragging attachment), one three-bit boring machine, single boring machine, dowel making machine, two wood-turning lathes, automatic grinding machine, one emery wheel (assorted) grinding machine, one power-driven grindstone.

Where it is not possible to equip the School so fully, it might be found possible to adopt a form of machine which combines two or more machine processes.

Cabinet Making.

Where the training is given in a Technical School, it is desirable that short lectures on, and demonstrations of, the following matters should be held:—Geometry, scale-drawing, making all woodwork joints (such as mortises, dovetails, grooving and rule joints), veneering (principles and practice), bow fronts.

The practical course of instruction, whether given in a Technical School or in a factory or workshop, should include:—

- Grinding and sharpening of tools.
- Instruction in use of tools.
- Methods of planing and finishing of wood.
- Glueing and cramping.
- Making and fitting of doors and drawers.
- Mitering and fitting mouldings.
- Putting on hinges and locks.
- Finishing and sandpapering.
- Fitting up, putting on handles and fixing mirrors.
- Drawing in or marking off for machine processes.
- Instruction in making wood lists.
- Making of working drawings.

Chairmaking.

The practical course of instruction, whether given in a Technical School or in a factory or workshop, should include:—

- Grinding and sharpening tools.
- Instruction in use of tools.
- Methods of planing, spokeshaving and finishing wood.
- Dowelling, glueing and cramping.
- Fitting and glueing braces and screwing same.
- Fitting in loose seats.
- Fitting on arms and brackets.
- Making of moulds and templates.
- Drawing in, re-marking, and preparing for machines.

Carving.

Where the training is given in a Technical School, short lectures on, and demonstrations of, the following matters should be held:—Clay modelling, drawing of relief ornaments, geometry, historic styles of ornaments.

The practical course of instruction, whether given in a Technical School or in a factory or workshop, should include:—

- Grinding and sharpening tools.
- Instruction in use of tools.
- Tracing on pattern of design.
- Finishing from carved models. Grounding out design.

Inlay.

The course of instruction, whether given in a Technical School or in a factory or workshop, should include:—Preparation of veneers, geometry, free-hand drawing, banding, quartering, use of shooting board, springing, use of marquetry, fretting, pouncing, fitting up, filling, toothing.

French Polishing.

The practical course of instruction whether given in a Technical School or in a factory or workshop, should include:—

- Staining to shade and filling in pores of wood.
- Ingredients for polishing and mixing of colors.
- Varnishing and polishing with brush and rubber.
- Toning up and coloring.
- Practical polishing and finishing.
- Bright and dull finishing.

Upholstering.

The practical course of instruction, whether given in a Technical School or in a factory or workshop, should include:—

- Webbing and springing.
- Stuffing and covering loose seats and small chairs.
- Stuffing and covering show wood easy chairs.
- Stuffing and covering show wood couches.
- Stuffing easy chairs, firm fronts.
- Stuffing easy chairs, spring edge.
- Covering easy chairs.
- Stuffing settees and Chesterfields.
- Covering settees and Chesterfields.
- Making cushions, mattresses, &c.
- Cutting loose covers.

Sandpapering.

The practical course of instruction should include:—

- Making of corks.
- Instruction in use of sandpaper for soft and hard woods.
- Sandpapering flat surfaces and mouldings.
- Sandpapering round turning.

Drawing and Designing.

The first half of the Training Course should be spent only in a Technical School. Draughtsmen should learn historic styles, architecture, furniture and ornaments.

The practical course of instruction should comprise:—

- Practical geometry.
- Drawing from mouldings and sections.
- Drawing from cards and models, manufactured and natural objects.
- Freehand drawing.
- Drawing to scale of sideboards, tables, chairs, cabinets and bedroom furniture.
- Full sized working drawings.
- Interior schemes with scale plan, elevation and colored perspective.

LISTS OF TOOLS.

Liners.

3-ft. boxwood rule.	1 doz. lead pencils.
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Wood-working Machinists.

3-ft. boxwood rule.	1 hammer.
1 pair calipers.	1 screw driver.
1 12-in. steel rule.	1 oil stone and slips.

Wood Turners.

3-ft. boxwood rule.	5 sets of calipers.
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Cabinet Makers.

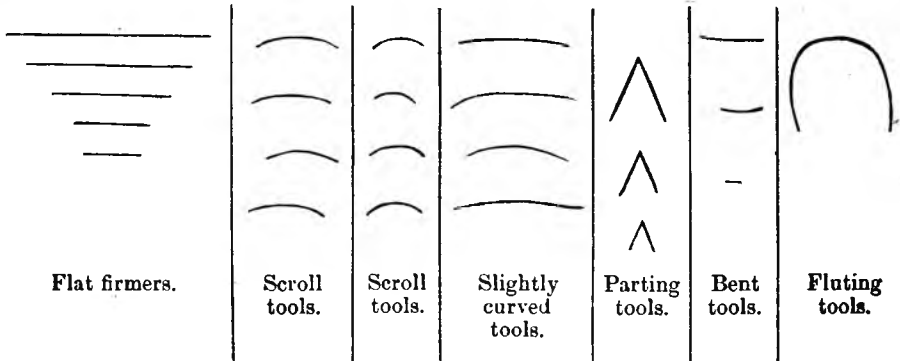
1 half long plane.	1 oil can.
1 jack plane.	1 draw point.
1 hand plane.	3 spindle screw drivers, 12-in., 8-in., 4-in.
1 tenon saw.	1 6-in. steel square.
1 dovetail saw.	1 bench hammer.
2 spokeshaves.	1 pair pincers, 7-in.
1 9-in. rasp.	1 nail punch.
1 9-in. file.	1 steel scraper.
1 3-ft. rule.	1 tool bass.
1 set stone (Washita).	
1 set of 5 bevel edge chisels, 1¼-in., 1-in., ¾-in., ½-in., ¼-in.	

Chair Makers.

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|--------------------------|---|
| 1 jack plane. | 1 oil can. |
| 1 hand plane. | 1 set of 5 chisels, 1½-in., 1-in., ¾-in., |
| 1 round sole plane. | ½-in., ¼-in. |
| 1 tenon saw. | 1 3-ft. rule. |
| 3 spokeshaves, assorted. | 1 6-in. steel square. |
| 1 9-in. rasp. | 1 bench hammer. |
| 1 9-in. file. | 1 pair pincers, 7-in. |
| 1 6-in. rasp. | 1 screw driver, 8-in. |
| 1 6-in. file. | 1 scraper. |
| 1 set stone (Washita). | 1 tool bass. |

Carvers.

30 tools, as undernoted.



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|-------------------|-----------------------|
| 1 mallet. | 1 small steel square. |
| 1 screw driver. | 1 set stone. |
| 1 hand cramp. | 6 gauge slips. |
| 1 hand screw. | 1 scraper. |
| 1 pair compasses. | 1 carding brush. |

Upholsterers.

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|---------------------|--------------------|
| 1 tack hammer. | 1 9-in. regulator. |
| 1 pair scissors. | 1 12-in. needle. |
| 1 stripping chisel. | 1 10-in. needle. |
| 1 3-ft. rule. | 1 spring needle. |
| 1 web stretcher. | 1 circle needle. |
| 1 mallet. | |

GOLD, SILVER, JEWELRY, WATCHES AND CLOCKS.

In some of its branches the trade is a highly-skilled one requiring special qualities of hand and eye, and some artistic qualifications. Boys are usually taken at 14 years of age, and serve seven years as learners. In many cases this is supplemented by special tuition either in the factory itself or in the Technical School. Drawing forms part of the training in each case. It is soon ascertained whether the pupil has special aptitude for this work.

Watch and Clock repairing is mostly carried on in Retail Shops where two or three men only are employed, or in small workshops, and these are distributed throughout the country in all considerable centres of population. For men with some mechanical ability and the desire to learn, this trade is a most interesting one. There is always scope for improvement with resultant higher wages. The work is sedentary, and good sight and steady hands are required. With this trade are generally associated jewelry repairing and silver hand polishing. The latter needs rather more strength than the former.

SUITABILITY OF THE WORK FOR DISABLED MEN.

The length of the course of training which is needed to qualify a man to be of use in the industry varies according to the different sections of the trade for which a man wishes to qualify. For some of these long training and a high degree of skill are required.

The processes most suitable for disabled men are given below, and are divided into three groups according to the character of the work or the period of training required. For all the operations it may be stated in general terms that the full use of both arms and hands and good eyesight are essential. Other qualifications are less so. The loss of a leg or minor bodily injuries would not disqualify; for some processes the loss of one or two fingers would not do so either. The work is generally light, and is carried on under clean and healthy conditions. It does not usually entail long hours of work.

PROSPECTS.

This of course depends upon unknown factors. The trade is to some extent a luxury trade, and has been unfavourably affected by the War. Large numbers of men have been temporarily transferred to other industries and will in due course return to their own trade.

A. Processes for which the maximum period of training is six months:—

1. Makers up of the cheaper kinds of gold jewelry.
2. Makers up of all imitation jewelry.
3. Makers up of cigarette cases, match boxes, and the less skilled forms of silverware and simple forms of electroplate goods.
4. Hand wire-drawers in the Jewelry, Silversmiths, and Electroplate trades.
5. Polishers and Finishers.
6. Stampers and Piercers.
7. Enamellers.
8. Helpers in Gilding and Plating Shops.
9. Melters and those attending to sweeps and residues.

B. Processes for which the maximum period of training is twelve months:—

1. Jewelers, Silversmiths and Electroplate workers in all the more skilled branches of the trades.
2. Setting in the Jewelry trade.
3. Britannia Metal-Smithing.
4. Silver hand polishing.
5. Die Sinking.
6. Spinning and turning.
7. Engraving.
8. Chasing.
9. Casting.

Also with a period of twelve months' training:—

Watch and Clock repairing.
Jewelry repairing.

PRINTING AND KINDRED TRADES.

The qualifications for the various processes within the trades vary, but the trade as a whole requires a degree of intelligence above the average, and also considerable aptitude and adaptability. In general terms, it may be stated, that for most of the processes good eyesight and the possession of one perfect hand is necessary, while the other hand should be capable of being used to a certain extent. Amputation of one leg or injury to legs would not be an obstacle in a certain number of processes.

There are, however, several other disabilities such as, for example, deafness, lameness, heart trouble, rupture, loss of one eye, general disability, &c., which would not necessarily debar a man from entering certain branches of the trades. Some of the processes do not involve heavy work; they are usually carried on under fair atmospheric conditions without special liability to accident or poisoning. Men who are suffering from heart trouble or shell shock would not be suitable for machine work.

SUITABILITY OF THE WORK FOR DISABLED MEN.

The following is a list of the processes suitable for disabled men:—

Printing Processes.

1. Hand Compositor.
2. Platen Machine Minder
3. Layer-on (Machine Feeder).
4. Monotype Caster.
5. Copy Holder.
6. Proof Puller.
7. Linotype or Monotype Keyboard Operator.

Lithography, including Lithographic Transferrer and Machine Minder.

Bookbinding.

1. Finishing, including Blocking.
2. Letterpress Forwarding.
3. Publishers' Binding.
4. Stationery and Account Book Binding.
5. Machine Ruling.

Process Work.

1. Line Operator.
2. Half-tone Operator.
3. Etcher.
4. Proving.

Stereotyping and Electrotyping.

Warehousemen, including Stock-keeper, Assistant Publisher, Guillotine Cutter, &c.

ANALYSIS OF THE PROCESSES.

1.—PRINTING PROCESSES.

General.

For most of the processes in this branch of the trade a good standard of education is necessary. The use of both hands is required but one may be partially damaged. A man who had an artificial leg would generally be suitable. Good eyesight is required.

1. *Hand Compositor.*

Good general education and intelligence is necessary, and ability to spell correctly. Full use of both hands and arms is required, but the loss of the index finger or a thumb on either hand would be a disqualification. The loss of one leg would not debar a man from entering the trade provided he has a good artificial limb and is able to move about fairly freely. Good eyesight is required, but the loss of sight in one eye need not prevent a man from taking up the work. Part of the work is heavy, there being frequent lifting of heavy forms of type.

2. *Platen Machine Minder.*

Power of concentration and adaptability required. Full use of arms and legs necessary, although the loss of a finger would not prevent a man from entering the trade. Both thumbs and both index fingers should be perfect. Ability to move about freely is desirable, but a man with good use of an artificial leg would not necessarily be disqualified. *This is regarded as a separate process only in London, and training for this work should be confined to that centre.*

3. *Layer-on.*

This process is sometimes called machine feeding. One hand must be perfect; the other hand may be damaged, but the thumb and index finger must be sound. Complete use of both arms is necessary. The man must stand at his work, but it is possible that by a slight adaptation of the machine, a high seat could be arranged for him, so that a man with an artificial leg would not be debarred from taking up the trade. The work is heavy, especially on the larger machines.

4. *Monotype Caster.*

This work is specially suitable for a man with a mechanical turn of mind, and requires considerable power of concentration. It is noisy and necessitates working over lead. The man must be able to stand, have the use of both hands, and good eyesight. It is not suitable for men suffering from shell shock or any pulmonary complaints.

5. Copy Holder.

Fair general education and intelligence is necessary, and the man must be accustomed to reading manuscript.

This work is regarded as being particularly suitable for certain types of disabled men as, for example, a man with an artificial arm, and employers are strongly recommended by the Trade Advisory Committee to give preference to such men over boys.

Copy Holders who are qualified may, if suitable openings are available, become Proof Readers according to the usual custom of the trade. A Proof Reader must be a man with a thoroughly good education, and he must have one hand with which he can write. Accuracy is essential. The whole of the work can be done while sitting, and the loss of one or both legs would not disqualify.

6. Proof Puller.

Suitable for a man with one hand damaged, but he must be able to stand at his work. Fairly heavy forms must be lifted, and there is some bending and reaching forward.

7. Linotype or Monotype Keyboard Operator.

Most of the work in this process could be done while sitting. The Linotype Operator must be able to reach occasionally to about 6 feet. The work of operating a Monotype keyboard might be done by a man who had lost one or two fingers, but both arms should be perfect. *Previous training as a Compositor is necessary.*

II.—LITHOGRAPHY.

Good intelligence and adaptability required. Both hands are needed but the loss of one or two fingers on one hand would not disqualify. In some branches of the work fairly heavy weights have to be lifted. The man must be able to stand at his work. Considerable accuracy and artistic taste are required. Colour blindness would definitely disqualify a man.

III.—BOOKBINDING.

General.

For the operations in this trade at least one hand must be perfect and the use of both arms is necessary. A man with an artificial leg would be eligible for training. In some cases fairly heavy weights have to be lifted. Good eyesight is required.

1. Finishing, including Blocking.

Considerable pressure, by means of the wrist and shoulder, is necessary, and both arms and one hand should be perfect. Great accuracy is required. For much of the work considerable artistic feeling is required.

2. Letterpress Forwarding; and (3) Publisher's Binding.

In this work one perfect hand is necessary although the other may be damaged. Both arms must be used to lift heavy stacks of books. Lameness would not disqualify provided the man can stand at his machine. There is a certain amount of noise, and in operating power machines there is considerable risk of injury to the hands.

4. Stationery and Account Book Binding.

For this process one perfect hand is necessary, although the other may be damaged. The use of both arms is necessary. A man with an artificial leg would not necessarily be disqualified, provided he is able to stand at his work.

5. Machine Ruling.

Light and delicate work involving extremely good eyesight as well as quickness and accuracy. One perfect and one nearly perfect hand required.

IV.—PROCESS WORK.

General.—Some of the work in this trade is fairly heavy, and, generally speaking, full use of both hands and arms is required, but one may be slightly injured. A good standard of education is necessary.

1. Line Operator and 2 Half-tone Operator.

These processes are suitable for a man with one injured leg who is able to stand and lift heavy dark slides and printing frames. Both hands must, generally speaking, be sound, but the loss of one finger would not necessarily disqualify. Full use of the thumb and a little finger is essential. The man must be able to bend freely; good eyesight is required; and he must not suffer from any pulmonary weakness due to gas poisoning or any other cause.

3. Etcher.

Suitable only for a man who has a knowledge of drawing and is able to use fine instruments. Good general intelligence required. The work could be done while sitting, and no heavy weights have to be lifted. One hand may be damaged. Good eyesight is essential.

4. Proving.

Full use of arms and hands necessary, although the loss of a finger would not necessarily debar a man from entering the trade. Ability to move about freely is desirable, but a man with good use of an artificial leg would not be disqualified. Considerable adaptability and power of concentration required.

V. STEREOTYPING AND ELECTROTYPING.

The work is mainly laborious, except in one or two sections known as Bench Work; good eyesight is essential and in all cases the various processes necessitate the use of both hands. Bench work can be done by a man with an artificial leg or foot, but generally speaking Producing could not be done satisfactorily by a man who could not stand and move about without restriction. This trade is not suitable for a man suffering from any pulmonary complaints.

VI. WAREHOUSEMEN.

A fair general education is necessary. Both hands (one may be slightly damaged) and arms are required for certain operations (*e. g.*, guillotine-cutting machine). For the Stock-keeper and Assistant Publisher a one-armed man would be suitable provided he could write well.

A.—Processes in which the length of the full course of training is Four years, viz.:

1. HAND COMPOSITOR.
2. LITHOGRAPHER.
3. BOOKBINDER—
 - (a) Finishing, including Blocking.
 - (b) Letterpress Forwarding.
 - (c) Publishers' Binding.
 - (d) Stationery and Account Book Binding.
4. MACHINE RULER.

Training with maintenance

First year.....Place of Training, Technical School
Second year.....Place of Training, Workshop

Final Course of Training without maintenance

Third year.....Place of Training, Workshop
Fourth year.....Place of Training, Workshop

B.—Processes in which the length of the full course is Three years, viz.:

1. LINE OPERATOR.
 2. HALF-TONE OPERATOR.
 3. ETCHER.
- } PROCESS WORK.

Training with maintenance

First year.....Place of Training, Technical School
Second year.....Place of Training, Workshop

Final Course of Training Without Maintenance

Third year.....Place of Training, Workshop.

C.—Processes in which the length of the full course of training is Two years, viz.:

1. PLATEN MACHINE MINDER.

2. PROVING (Process Work).

Training with maintenance

First year.....Place of Training, Technical School
Second year—

1st 6 months.....Place of Training, Workshop
2nd 6 months.....Place of Training, Workshop.

3. STEREOTYPING AND ELECTROTYPING (*see also below*).

Training with maintenance

First year—

1st to 3rd month.....Place of Training, Technical School and Workshop.
4th to 6th month.....Place of Training, Workshop.
7th to 12th month.....Place of training, Workshop.

Second year, 1st 6 months.....Place of Training, Workshop.

Final Course of Training—

Second year, 2nd 6 months Place of Training, Workshop
D.—Process in which the length of the full course of training is Eighteen months.

WAREHOUSEMEN.

Training with maintenance

First 6 months Place of Training, Technical School
Second 6 months Place of Training, Workshop

Final Course of Training without maintenance

Third 6 months Place of Training, Workshop
E.—Process in which the length of the full course training is One year, viz.:

MONOTYPE CASTER.

Training with maintenance

First 6 months Place of Training, Technical School
Second 6 months Place of Training, Workshop
F.—Process in which the length of the full course of training is Nine months, viz.:

LAYER ON.

Training with maintenance

First 3 months Place of Training, Technical School
Second 3 months Place of Training, Workshop
Third 3 months Place of Training, Workshop
G.—Process in which the length of the full course of training is Six months, viz.:

Training with maintenance

First 3 months Place of Training, Technical School
Second 3 months Place of Training, Workshop
H.—Process in which the length of the full course of training is Three months, viz.:

PROOF PULLER.

Training with maintenance

First 3 months Place of Training, Workshop
In the case of Stereotyping and Electrotyping, during the first three months the man shall spend one-half of the working week in the workshop and one-half in the Technical School; during the succeeding nine months he shall spend a minimum of 8 hours per week in a Technical School, such attendance to be made during the usual working hours. Where no suitable technical training is available the whole of the training may be given in a workshop. *Training for this process shall not include training in newspaper work.*

In the case of the Copy Holder, a man who has completed his training as stated in Instruction 3 above (group G), provided he is qualified, may, if suitable openings are available, become a Proof Reader according to the usual custom of the trade.

In the case of men who have previously been employed in the Printing and Allied Trades and who have some knowledge of the work of the trade, the Local Technical Advisory Committee shall have power, in suitable cases, to advise the reduction of the period of training, both in the Technical School and in the workshop, having regard to the length of time the man has been engaged in the trade.

A Hand Compositor who is no longer able to follow his trade may, if suitable in other respects, be trained as a Linotype or Monotype Keyboard Operator. Such training must be given in a Technical School or other approved Training Institute for a maximum period of three months.

A disabled man undergoing training in any process shall be regarded as an Apprentice to the trade as far as the computation of the proportion of skilled men to apprentices is concerned.

In the case of the Hand Compositor, the man shall have, wherever practicable, during the last year of the period of training, facilities under existing trade practices for training as a linotype or monotype keyboard operator, or for any other composing machine.

In the cases of the Hand Compositor and the Copy Holder, the disabled man shall, before he is considered to be eligible for training, be required to undergo an examination in regard to his general education and intelligence in order to determine to the satisfaction of the Local Technical Advisory Committee whether he is suitable for training. The Trade Advisory Committee shall be responsible for arranging with the Local Technical Advisory Committee for the conducting of, and the standard to be adopted at, the examination.

In the case of all processes the first month of training, both in the Technical School and in the workshop, shall be a trial period; in the case of Technical School training, if at the end of this period the man's progress is considered by the Local Technical Advisory Committee as satisfactory, he shall proceed with his training.

In the case of all processes mentioned in Groups A, B, C, and D, if his progress is considered by the Local Technical Advisory Committee as not being satisfactory, he shall have a further trial period of two months. If at the end of this period he is still unsuitable for the trade, his training shall cease. In the case of all other processes mentioned in these Instructions, if at the end of the trial period of one month he is, in the opinion of the Local Technical Advisory Committee, unsuitable for the trade, his training shall cease.

At the end of the trial period of workshop training, *i. e.*, at the end of the first month, an agreement shall be entered into between the employer and the disabled man undergoing training, and this agreement shall be binding upon the disabled man to complete his course of training and upon the employer to retain him in his employ during the full period of training, both with and without maintenance, in a workshop, provided that, if either party to the agreement desires, for some substantial reason at any time to terminate the agreement, the case shall be referred for settlement to the Local Technical Advisory Committee, who shall have power, after hearing evidence, to advise that the agreement be terminated.

SYLLABUS OF INSTRUCTION.

The following is a suggested syllabus of instruction for men undergoing a course of training in a Technical School or similar Institute. Theory and practice should run concurrently and must be such as to assist the man to earn a livelihood.

Classes in general education, directly connected with trade work, should be conducted in: English; history of printing; Calculation: sizes and sub-divisions of paper, casting-off, etc.; Hygiene, Citizenship, Factory Acts, etc.

COMPOSITION.

Hand—

Explanation and use of materials and fittings used in the composing room. Technical terms. Lay of case. Correct attitude at frame. Spelling and punctuation. Reader's marks. Corrections and revising. Casting-off copy. Composing. Bookwork. Tabular works. General commercial. Display and "lay-outs." Imposition. Proofing. Distributing. Systematic clearing and store keeping.

Mechanical—

Linotype.—The construction and operation of the machine. Care of machine. Correct fingering. Hints for acquiring speed. Correct condition of metal. Changing of parts. Adjustments.

Monotype: Keyboard.—Theory and construction of the keyboard. Care of machine. Object of keyboard and its relation to caster. Reading perforations. Changing of keyboard to various lay-outs. Adjustments.

Monotype: Caster.—Parts of machine and their functions. Use of micrometer. Sizes and the handling of type. Appreciation of the need for accuracy in setting and keeping metal in proper condition to ensure good results. Care of machine. Adjustments.

Copy Holder—

(Instruction to be of a general knowledge character.)

Technical terms used in the printing office. Sizes and characters of types. Composition. Manuscript and reprint copy. Abbreviation. Division of words. Marks of punctuation. Reference marks and signs. Reader's marks. Peculiar spelling.

MACHINE.

Platens—

Cleanliness and careful use of materials employed in the machine room. Theory and construction of various types of machines. Principles of making-ready. Overlay-cutting. Adjustments. Care of rollers. Paper. Inks. Running off different grades of work, including half-tone, in black and color. Process proving on handpress and machines.

Layer-on—

Inculcating habits of cleanliness and economical use of cleaning materials. Care and oiling of machines. How to handle paper. Care of paper while printing. Elementary principles of different types of printing machines. Feeding various types of machines. Automatic feeders.

LITHOGRAPHY.

Printing—

Principles of lithography. Composition of various printing surfaces and how to prepare them. Properties and actions of materials used. Construction and management of various makes of presses and machines. Rollers. Paper. Inks. Transferring. Patching-up. Rolling-up. Resists. Etches. Copperplate transfers. Proving. Treatment of various kinds of work on press and machine. Color: harmony, mixing, and matching. Elementary photolithography and kindred processes.

PHOTO-ENGRAVING.

(Line and half-tone.)

Operator—

Principles of photography, including wet collodion and dry plates. Glass cleaning. Coating. Sensitising. Preparation of solutions. The camera; its adjustment and operation. Exposing. Developing. Intensifying. Stripping. Screen negative making.

Etcher—

Printing on metal by enameling and other process. Preparation of solutions. Various methods of etching. Etching machines. Fine etching. Use of engraving tools. Vignetting. Burnishing. Rouletting. Routing. Beveling and mounting.

BOOKBINDING.

The technical institute training should cover as wide a field as possible, including forwarding and finishing in letterpress, publishers' and stationery and account book bindings.

Forwarding—

Principles of bookbinding. Outline of folding, collating and sewing. End papers. Preparation of boards. Edge decorations. Rounding and backing. Head-banding. Case making. Materials used in covering. Making joints and ends. Paring leather and mitreing corners. Cost of materials. Approximate cost of different styles of bindings.

Finishing—

Knowledge of various materials used in covering books. Use and care of tools. Marking-up. Tooling. Gold work. Lettering. Methods of preparing different materials for finishing. Letterpress finishing. Treatment of various styles of binding. Crushing and polishing leathers. Blocking. Principles of design applied to bookbinding.

STEREOTYPING AND ELECTROTYPING.

The part-time training in the workshop shall follow the ordinary work-shop routine, giving assistance in the various sections as required.

The part-time training in a printing technical institute shall be on a general technical knowledge basis:

How to handle type and forms. Locking up forms. Outline of various methods of reproducing illustrations. How to recognize different classes of printing plates. Methods of mounting. Objects of making-ready. Faults due to imperfect printing. Main points of different types of printing machines. Technical terms. Where possible, progressing to elementary instruction in composition of moulds. Electricity. Electro-deposition of copper and nickel. General chemistry as applied to an electrotypist's work.

WAREHOUSE.

System. Handling and care of paper. Classes of paper. Mill numbers. Stocking of paper. Counting. Giving-out and keeping of stock. Tying up and marking reams. Subdivisions. Judging. Equivalent weights and prices. Knocking up. Knowledge of machines employed in the warehouse.

TAILORING (*Custom*).

Custom tailoring trade is, so far as manufacture is concerned, divided into two branches, viz.: (a) that one in which the garments are made on the premises or elsewhere by persons directly in the employment of the merchant tailor, and (b) that in which the garments are given out to be made up by a sub-contractor in his own workshop, or are sent to a wholesale factory which specializes in the work.

This section is concerned only with the first of these branches (a), and the difference in organization between that branch and the wholesale branch (b) is accompanied as a rule by important differences in the method of manufacture, while the system of working even within this branch varies. In some cases each garment (excluding the cutting and trimming) is made throughout by one man on piece-work, or by a man paid weekly wages assisted by an apprentice. In other cases the work is done in tailors' workshops where women are being employed along with men on the same garments. The women often do most of the sewing and the machining, and the men the highly skilled parts and the pressing.

GENERAL PROSPECTS.

There seems to be no doubt that there will be a fair prospect of employment for disabled men in this trade after the war. The making up of garments has been done, to a very great extent, by foreigners of various nationalities.

CHIEF CENTRES.

Custom garments are made in every large and small town and in many villages, and the extent of the trade varies in accordance with the population of the centre concerned.

SUITABILITY OF THE WORK FOR DISABLED MEN.

The work falls into two divisions (1) cutting, and (2) making-up.

(1) *Cutting*.—The cutter is the most important and the most highly-paid of tailors. He takes customers' measurements, drafts the patterns, does the fitting-on, and supervises the sewing and making-up, and generally acts as foreman of the tailors' workshop. A good knowledge of the work of a sewing tailor is considered indispensable, and most cutters have themselves risen from the ranks of the sewing tailors. A long training and extensive knowledge of the trade are required in most cases, and this would seem to make the position unattainable by men with no tailoring experience, but it may be noted that a man who has already been a sewing tailor would not be deterred, by the loss of one or two fingers of his left hand, from filling a cutter's post. As a matter of fact, men thus disabled have already been trained with success as cutters.

(2) *Making-up*.—Here there would appear to be an excellent prospect for a partially disabled man, so long as he possessed the full use of both his hands with all his fingers and had good eyesight. The loss of one leg, or even both, would not be a serious handicap; indeed there has always been among tailors a certain number who were incapacitated by some injury to the legs. The only severe muscular exertion is in connection with the manipulation of a heavy iron used in pressing. The work otherwise is light and the conditions under which it is done in the workshops are normal, there is no noise of machinery, no vibration, no extremes of temperature or of moisture or dryness in the air. It would afford a very good opening for a young or youngish man, though less suitable to men over thirty. The work is done either in the private workshops which many of the firms engaged in the best class of work possess, or at the worker's own home, or in common workshops conducted on a co-operative basis, in which each tailor hires a "sitting." For the highest class of work considerable experience and dexterity are essential. A first-rate tailor is an artist, and there is much scope for individual taste and ingenuity.

Each man must be able to make garments throughout and as a rule, he specializes in one particular type, so that there are three branches of the trade: (1) Coat-making; (2) Trousers-making, and (3) Vest-making, which is often done by women.

WAGES AND HOURS OF WORK.

The work is skilled and the wages are good.

There are seasonal variations of trade. The Spring is generally the busiest season, but the irregularity is capable of being reduced to some extent by a judicious arrangement of work.

LENGTH OF TRAINING REQUIRED.

A thorough training is necessary, but the length of time would vary with the learners' adaptability. A year in a technical school during the usual hours of day trade schools would provide a good foundation, and except in those sections of the trade in which craftsmanship of a high order is required, a man would afterwards probably be qualified for employment that would yield a living wage. After introduction to the workshop he would require the knowledge of details and the varied skill which lie beyond the range of a school.

The following recommendations have been made by the Trade Advisory Committee in England:

(1) That training be given in day trade training schools, for a period of 12 months for the hours customary in such schools.

(2) That there be, in the case of each man accepted for training, a probationary period of four weeks, and that during the whole period of training the man remain under continuous supervision.

(3) That a syllabus of the training which should be given in training schools be framed by the Trade Advisory Committee.

(4) That Local Technical Committees, consisting of representatives of employers and workpeople in the trade, be appointed in connection with each training centre to superintend the training given.

(5) That questions arising with regard to the wages of individual disabled men be deferred to the local Advisory Wages Boards, and that the Advisory Wages Boards should take steps to secure the advice of persons familiar with and representative of the trade.

(6) That the Trade Advisory Committee be kept informed of the number of disabled men to be trained for the Tailoring Trade, and have power to impose restrictions on the training of any number in excess of that which the trade can reasonably be expected to absorb.

Active Careful Guidance

by these directors who direct

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the nation's wounds, to
care for him who shall
have borne the battle,
and for his widow and
his orphans."*

Abraham Lincoln



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